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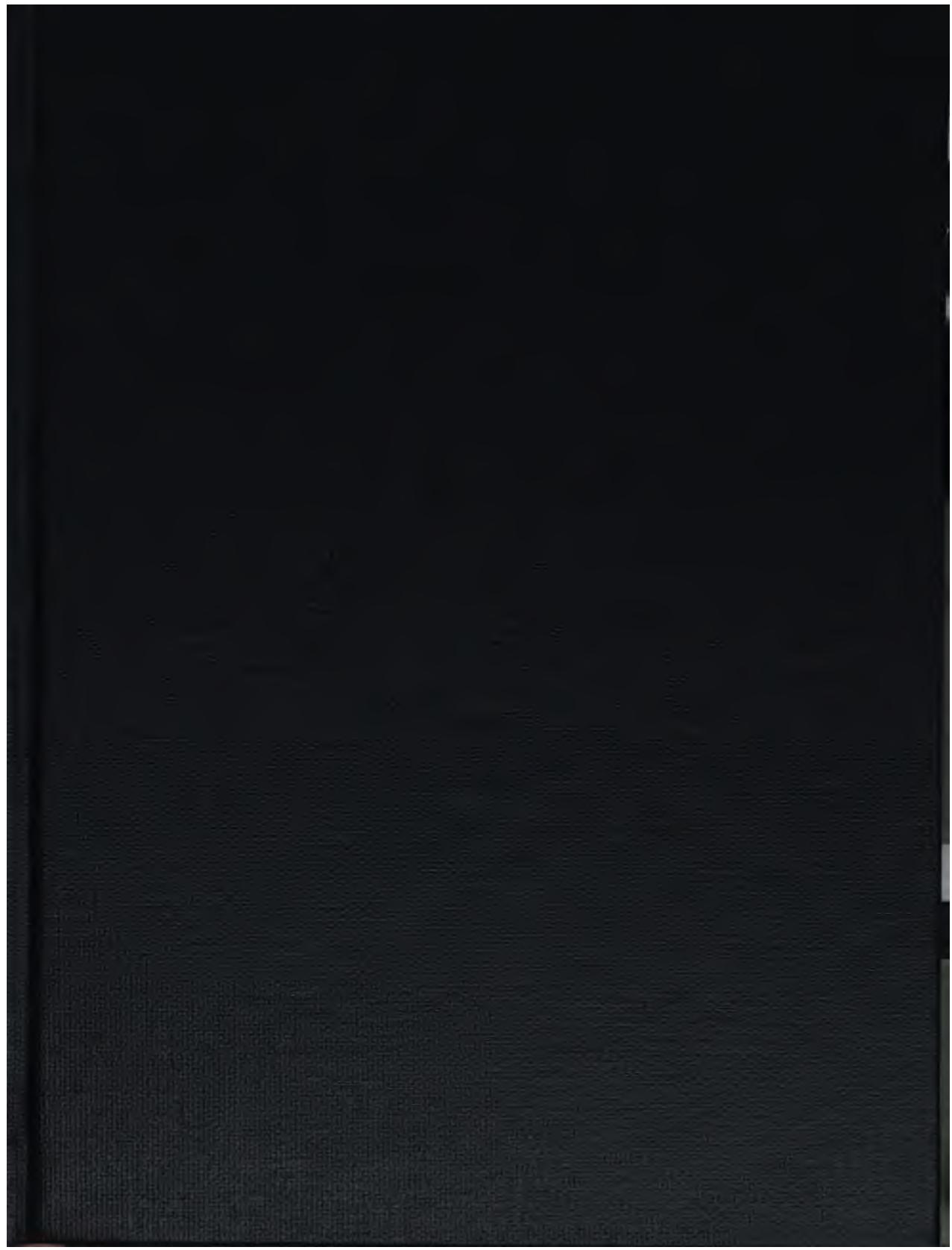
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JEWISH STATISTICS

JOSEPH JACOBS

DAVID SUSS

Jud
340
891

JACOB

JEWISH STATISTICS

1840-1841

THE JEWISH TYPE.



COMPOSITES.

ILLUSTRATIONS (

Full Face.



FRANCIS GALTON, F.R.S. PHOTO
Components.

COMPOSITE PORTRAITURE.

STUDIES
IN
JEWISH STATISTICS,
SOCIAL, VITAL AND ANTHROPOMETRIC,
BY
JOSEPH JACOBS.

In relation to society numbers are qualities.

GEORGE ELIOT, *Dan. Deronda*, c. xlii.

LONDON:
D. NUTT, 270, STRAND.

1891.

Jud 340. 891

TO

ASHER I. MYERS,

WHO FIRST SUGGESTED THESE STUDIES,

AND HAS THROUGHOUT ASSISTED THE AUTHOR

WITH HIS WIDE KNOWLEDGE

OF JEWISH AFFAIRS.



P R E F A C E.

THE following studies began in an attempt to get reliable data about the Jews of Europe when the anti-Semitic movement was at its height. In going through the literature of the subject, of which I have published a bibliography ("The Jewish Question, 1875-1885," Trübner), I was struck by the paucity of trustworthy evidence, both among Jews and their opponents. The subject once entered upon, I got interested in it, apart from its polemical bearings, and I collected at the time (1882-3) a mass of materials of all kinds. Some of these I utilized in the following studies, which appeared in the *Jewish Chronicle* of 1882-5, and in the *Journal of the Anthropological Institute* from 1885 to 1889. The latter part of the paper on Vital Statistics appears here for the first time. As they were printed, a number of "off-prints" were made of them, and they are now collected together. Fragmentary as they are, these contain a larger quantity of statistical material than is elsewhere available.

I have to thank the editor of the *Jewish Chronicle*, and the Council of the Anthropological Institute, for their kind permission to reprint these articles. My friend, Mr. I. Spielman, has also allowed me to include a paper written in common with him from materials collected by him.

JOSEPH JACOBS.

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STUDIES IN JEWISH STATISTICS.

I.—CONSANGUINEOUS MARRIAGES.

SIR ROBERT PEEL once said : " Two things alone defy the power of the immortal gods—figures and the past." The science or method of statistics, which deals with the past by means of figures, is raised by this dictum to a lofty eminence, which it by no means retains in the popular mind. By the majority of persons it is regarded as the most dismal part of the " dismal science," and dislike easily leads to distrust. *La statistique toujours varie; bien fol qui s'y fie,* is the refrain of the doubters or, as they put it, " statistics will prove anything." As against the blind confidence of those who pin their faith to everything that takes the form of percentages, such distrust is fully justified. You cannot get out of statistics more material than you put into them and very often the rough experience which goes to form popular impressions is fully as accurate and instructive as all the parade of decimals. We learn as much from the statement that many Jews are light-haired as from the information that 36.4 per cent. are fair. And as regards accuracy the former may be based on a far wider range of observation than the latter which might be deduced from the fact that 4 out of 11 Jews were found to be fair.

On the other hand, however, when we wish to compare one body of men with another, we are utterly in the dark without statistics. Whenever we want to discover, *e.g.*, whether Jews are longer lived than their neighbours, have more or less lunatics than the latter and so on, it is impossible to decide without definite numbers to compare. And almost all questions of interest to Jews with which statistics can deal take this comparative form. And, further, when it is desired to determine how far Jews have progressed or retrograded in any particular quality, no results can be regarded as satisfactory which do not take the form of statistics. In short, while general

impressions are often sufficient to determine the mere presence of any quality among Jews, for all purposes of comparison recourse must be had to statistics for any trustworthy result.

This is still more the case when the object of investigation is to discover the relation of cause and effect between two sets of phenomena. If a causal nexus is to be established, the most satisfactory method is that termed by logicians "the method of concomitant variations" which may be roughly summarised "more or less of the cause, more or less of the effect." We can only determine this "more or less" by the aid of the statistical method.

To take an example. In the many discussions about the alleged evil effects of consanguineous marriage, the Jews are referred to by both parties in support of their views. The assertion is often made and as often denied that Jews suffer more from deaf-mutism, idiocy, &c., owing to the fact that consanguineous marriages are more frequent among them. Yet until we know the proportion of consanguineous marriages among Jews and the proportion of the offspring of such marriages among Jewish deaf-mutes, &c., we cannot establish any causal connection between the two facts. The mere assertion that there are more such marriages among Jews and more of their results among the afflicted classes does not help us until we know how much more. For if there is only the same proportion in the two cases, the relation of cause and effect is by no means established. Changing the venue for a moment and applying Macaulay's well-known illustration, if there were 10 per cent red-haired Jews we should expect to find 10 per cent. of Jewish deaf-mutes red-haired. We could only assume a causal connection between "erythrism" and deaf-mutism if (say) 20 per cent. of Jewish deaf-mutes had red hair. Similarly, if 10 per cent of Jewish marriages are between relatives and 10 per cent of Jewish idiots, deaf-mutes, &c., were found to be the offspring of such marriages, it would only follow that consanguineous marriages, if equally prolific, had no effect on the production of deaf-mutism. It is clear, therefore, that the first stage in any such enquiry is to determine the proportion of consanguineous marriages. This I have attempted to determine for English Jews in the following manner.

In 1875, Mr. G. H. Darwin, son of the great naturalist, read a paper on marriage between first cousins before the Statistical Society and summarised his results in the *Fortnightly Review* for July of that year. Examining some marriage lists in the newspapers he observed that several occurred between persons of the same surname and on determining the proportion of these "same-name marriages" he found that they occurred in far larger numbers than could occur by chance. By circulars and other means Mr. Darwin calculated that of these same-name marriages 57 per cent. were between first cousins. Now, in marriage between first cousins the bride has the same name as the bridegroom only when she is the daughter of his father's brother, while there remain the daughters of his father's sisters and of the maternal uncles and aunts who may likewise form first cousin marriages. It would thus seem that same-name marriages between first cousins form a fourth of such marriages. But there are less paternal than maternal uncles and more paternal aunts than maternal, because father and mother have to be subtracted from their respective families for the purposes of this inquiry. It follows, therefore, that same-name marriages between first cousins form less than a fourth of such marriages, and Mr. Darwin, by some very ingenious formulæ calculated that they form on an average only a fifth of all marriages between first cousins. If, therefore,

we multiply the number of same-name marriages by 2.85 ($= .57 \times 5$) we should get, on this method, the number of all marriages between first cousins.

Mr. Darwin applied his method to several classes of Englishmen with the following results :

Source.	Number of Marriages	Number and percent- age of same-name Marriages.	Calculated percent- age of all first cousin Marriages.
<i>Pall Mall Gazette</i> advts ...	18,528	282 1.25	3.54
Burke's <i>Landed Gentry</i> ..	9,549	144 1.50	3.75
English and Irish Peersage ..	1,989	18 1st cousins 0.90	4.50
Metropolitan District.....	88,155	— 0.55	1.50
Urban Districts	22,846	— 0.71	2.00
Rural Districts.....	18,891	— 0.79	2.25

In the case of the Peersage Mr. Darwin examined only the same-name marriages between first cousins and multiplied this at once by 5. His method is to some extent confirmed by his results which are what one would have anticipated, the peerage intermarrying most, the landed gentry next, then the upper middle-class and so on.

It occurred to me that it would be desirable to apply the same method to English Jews, and, with the aid of a friend, I examined all the marriages contained in the *Jewish Chronicle* from the beginning of the New Series in 1869 to the present time with the following results :

<i>Jewish Chronicle</i> advts.	Number of Marriages	Number and percent- age of same name Marriages.	Calculated percent- age of all first cousin Marriages.
April, 1869—Dec. 1882	1,589	42 2.64	7.52

Thus, it would appear that of all marriages between English Jews, $7\frac{1}{2}$ per cent. are between first cousins, a proportion more than half as large again as that occurring among the aristocracy, and five times as great as the proportion calculated for the inhabitants of London. The result completely justifies the popular impression that Jews marry among their own families more than the rest of the population, and, if confirmed by wider induction, may serve as the basis of investigation into that much vexed question, the effects of marriage between near kin.

Before, however, accepting even this provisional result, it is desirable to take into account an element in the calculation, which Mr. Darwin considered that he could neglect in his investigations, but which may not be so unimportant in the case of English Jews. Finding from one of the Registrar-General's Reports that one in every 73 Englishmen is named Smith, 1 in 76 Jones, 1 in 115 Williams, and so on, Mr. Darwin calculated that the chance of a Smith marrying a Smith was represented by the square of $\frac{1}{73}$ or $\frac{1}{5316}$, that of a Jones-Jones marriage $\frac{1}{76 \times 76}$ and so on; and adding together all these fractions, the chance of a same-name marriage occurring was found to be only one out of a thousand marriages. This Mr. Darwin neglected, as he did not profess accuracy to the second place of decimals, and, besides, he only considered that 57 per cent of same-name marriages were between first cousins, the rest being between more distant relations.

But among Jews it is a familiar fact that surnames are fewer than among the general population, and it remains to be considered how many of the 42 same-name marriages in the *Jewish Chronicle* were due to the greater chances of such unions owing to the paucity of surnames among English Jews. Taking the 4,720 names contained in the Reports of the Board of the Board of Guardians for 1880, the Jews' Hospital for 1878, and the

Anglo-Jewish Association for 1877-8 (London, Birmingham, Liverpool, and Manchester only), I found the most popular names among English Jews to be the following :

Name.	Proportion.	Name.	Proportion.
Cohen.....	1 in 26	Abraham and Abrahams	1 in 84
Davis	1 " 32	Harris	1 " 84
Levy	1 " 35	Moses	1 " 96
Joseph	1 " 47	Nathan	1 " 107
Isaac and Isaacs	1 " 52	Woolf and Wolff	1 " 115
Myer and Myers	1 " 64	Barnet and Barnett.....	1 " 127
Phillips	1 " 65	Benjamin	1 " 181
Samuel	1 " 66	Emanuel	1 " 181
Solomon and Solomons	1 " 66	Hyam and Hyams	1 " 185
Jacob and Jacobs	1 " 78	Marks	1 " 185
Hart	1 " 81	Hyman and Hymans ..	1 " 149

The proportions given are too high for English Jews in general, since many names recur in the three lists ; the lists themselves are not representative of the whole community in point of names, and we should for the present purpose distinguish between double forms, like Isaac and Isaacs. But the names, on the other hand, are drawn from the very class who are likely to advertise their marriages in the *Jewish Chronicle*, and for that reason I accept the above estimate in default of any other. It may be added that the order of most frequent names and approximately the proportions are nearly the same in the longest of the lists—that of the Jews' Hospital Report. With regard to one name the proportion is still too high. There are special reasons why the name "Cohen" should occur in the reports of two of the above institutions in more than the usual proportion. I am inclined to take the proportion given by the Report of the Anglo-Jewish Association, viz., 1 in 30, as more near to the truth. In the largest list of contemporary Jewish names with which I am acquainted—Lippe's *Bibliographisches Lexicon*—the Cohens, even with the addition of the Cohns and the Kohns, make up only 108 out of the 4,600 names, which would give a proportion of about 1 in 45 for Jews in general.

Accepting the proportions in the above list, we find that without any intermarriage a Cohen-Cohen marriage would occur in every 900 marriages if we accept $\frac{1}{30}$ as the proportion of Cohens to the general Jewish population. One marriage out of 1,024 would be between persons of the name of Davis, one out of 1,225 between Levys ; there would be in the natural course of events one Joseph-Joseph marriage out of every 2,209 marriages and so on. Summing up the squares $\frac{1}{30^2} + \frac{1}{1024} + \frac{1}{1225} + \frac{1}{2209} + \frac{1}{3025} + \text{ &c.}$, we find that about 5 same-named marriages would occur by chance in every 1,600 Jewish marriages, and, therefore, about 8 in the 1,589 examined in this investigation. This would leave only 84 marriages to be accounted for by the method employed above, and we should have instead of the figures above, 84 same-name marriages out of 1,581, i.e., 2.18 per cent. and, therefore, only 6.07 per cent. of first cousin marriages, the paucity of surnames among Jews causing a difference of one and half per cent in the percentage of first cousin marriages.

But against this correction we have to set other factors which in all probability counterbalance it. It frequently happens among Jews that two brothers adopt entirely different surnames, and any union between their offspring would fail to appear among same-name marriages. Further it has become recently the fashion for English Jews to remedy the paucity of surnames by adopting others of similar initial, a fashion satirised by the dramatist in

calling a Jewish character "Isidore Montmorenci." It is probable, e.g., that the name "Moses" would be higher up in the above list if all those who could rightfully claim it had been added to the number of those who still retain it. The children of two brothers, one of whom had adopted a various reading of his name would therefore not come under the category of same-name marriages. In the ten volumes of the *Jewish Chronicle* examined by myself, I noticed 4 such marriages of the "Moses-Montmorenci" type, and doubtless others escaped my notice by the very nature of the case. Supposing a couple more to occur in the remaining four volumes examined by my friend and only two more of names entirely different to lurk unseen in all the fourteen volumes of the new series, and we would have eight names missing from the list of same-name marriages owing to change of name to counterbalance the eight which might occur by chance owing to the paucity of surnames.

I am inclined, therefore to reject the correction which seems at first sight due to the few surnames current among Jews, especially as the fractions which give the corrected estimates are probably too large as an examination of the 42 names would show. Only 14 of these marriages are between persons with names from the above list, the remaining 28 having more unfamiliar names, and only 8 are from the first 10 names. Further, we only assume that 57 per cent of these same-name marriages are between first cousins and this constant is by no means certain and may be too low. The percentage of first cousin marriages as originally determined may therefore be still retained and we may say that of every two hundred marriages among English Jews of the upper and middle classes fifteen are between first cousins.

It by no means follows that the same proportion holds for all the Jews in England. The marriages advertised in the *Jewish Chronicle* are only about one-third of all Jewish marriages in England as given in the Reports of the Board of Deputies. The above conclusions only hold, therefore, for the "upper third" of the Jews in England, the original "English colony" as we may term them. What may be the amount of intermarriage in the large "foreign contingent," which, probably form the remaining two-thirds it is impossible to say, without consulting the registers of the Great Synagogue. I merely wish to guard against the precipitate conclusion that is likely to be drawn from the above investigation, that all the Jews in England marry their first cousins to the extent of 7½ per cent. in all marriages. It is needless to add the caution that still less do these results apply for Jews universally.

It would be well if statisticians adopted the custom of pointing out the weak links in any long and complex chain of reasoning. In the above argument it has been assumed that 57 per cent. or over a half of the same-name marriages, i.e., 24 out of the 42, were between first cousins. This assumption has been adopted from Mr. Darwin and is by no means thoroughly substantiated by him, but no method was seen of checking it. At the worst, however, any inaccuracy here on Mr. Darwin's part would only alter the absolute percentages; it would not alter the relative frequency of first cousin marriages among the middle-class English Jews compared with the remaining sections of Englishmen examined by Mr. Darwin. As has been vaguely conjectured but never hitherto proved, English Jews have the largest number of such marriages among all classes of the population.

We may now pass on to consider the causes which make consanguineous marriages so frequent among the Jews. In the Middle Ages,

while the small size of the Jewish communities would limit the choice, their migratory habits and the frequent arrival of fresh blood, in the shape of victims of persecution and of wandering merchants or scholars, might have modified the tendency. And, later on, the institution of the *Schadchan*, or professional matchmaker, would tend to break through the family bonds ; it is said that in Poland a young Jew often marries a girl he has never previously seen by this means. Unfortunately, the genealogical tables of mediæval Jews rarely give the name or family of the mothers, and one cannot say how far consanguineous marriages were then frequent. The family Ghirondi, to which Moses Nachmonides, Levi ben Gerson (who married his first cousin), and Simon Duran belonged, seem to have married "in and in" (Conf. Stein-schneider, Cat. Bod., col 2305—2310), with excellent results, so far as intellectual proficiency was concerned.

The causes of intermarriage were probably : the absence of any such prohibitions as Mother Church imposed,* the existence of small communities scattered about, the rare communion between the sexes, and, above all, the absence of any ideal of pre-nuptial love. It has been said that a shy man usually marries his first cousin as she is the only maiden who will propose to him ; and towards his womankind, at least, the Jew was, up to the present century, peculiarly shy and reserved. Among English Jews several additional causes may be conjectured for intermarriage, which render it probable that the rate among them is higher than among their Continental brethren. The absence of the *Schadchan* would prevent much intermixture of blood between different parts of the country, and especially in the many small communities dotted over England. Their general wealth would bring into play the motive of "keeping the money in the family," and their insular position and feelings prevented frequent marriages with foreign Jewish immigrants. And further, the tendency to "shoolism," or the limitation of acquaintanceship to the members of one's own synagogue, has only lately been broken through by such centralising institutions as the United Synagogue, the Board of Guardians, and the Anglo-Jewish Association. Owing to these causes, peculiar to the "English colony," there is some probability that consanguineous marriages are more frequent among Jews in England than on the Continent.

From treating of causes one naturally passes on to discuss effects. On this point a remarkable change of opinion has occurred of late years, at least in England. From 1860 onwards a general impression prevailed, due as much to Darwinian prepossessions in favour of cross-breeding as to the researches of a few French doctors, like Boudin and Devay, that consanguineous marriages give rise to all the ills that flesh is heir to. But owing to the appearance of Mr. Huth's able and exhaustive treatise (*The Marriage of Near Kin*, Churchill, 1875), the pendulum of opinion has swung over to the opposite side in England. It is now very generally considered that near kinship in marriage has no evil effect *per se*, but intensifies any

* It may be necessary to point out that, according to Rabbinic law, marriage between first cousins, between uncle and niece, and even between step-brothers and sisters is fully permitted, and that between uncle and niece regarded as particularly praiseworthy. Marriage between step-brothers and sisters was, however, objected to by Palestinian authorities (Jer. Talm. *Jebamoth*, ii. 4) and, though legal, has rarely occurred (*Sefer Chasidim*, § 879). On the other hand the union of aunt and nephew is prohibited, and Jewish law allows of no dispensation in this or any other case (Z. Frankel, *Grundlinien des mosaisch-talmudischen Judenthums*, 1860, p. xviii.).

diathetic taint that may occur in the family. If one party to the marriage be scrofulous, *e.g.*, and the other not, the children may inherit a scrofulous taint, but not more than if the scrofulous subject had married a spouse of entirely different family. If, however, both the cousins have a scrofulous diathesis, it is thought that the offspring are more likely to be afflicted with scrofula, and in more intense forms than in the case of two persons of scrofulous tendencies, but of different families. And of course there is a greater chance of two first cousins having the same hereditary taint.

Both in the earlier and later stages of the controversy the Jews have been appealed to by both sides. M. Boudin pointed triumphantly to the larger proportion of idiots and deaf-mutes among Jews. Mr. Huth inquires how many of these are known to be due to consanguineous marriage, and points with no less triumph to the superior vitality and cosmopolitanism of Jews, and instances the Ghetto as a proof of their superior ability to withstand the worst sanitary conditions. In all the heat of controversy, however, not a single fact of statistical value has been arrived at. Mr. Huth rightly rejects, as Oesterlen had done before him, the solitary investigation of M. Boudin as to the case of three congenital Jewish deaf mutes alleged to be at the Paris asylum. And, even if this had been substantiated, it could have been of no argumentative value owing to the smallness of the number and also since the percentage of consanguineous marriages among French Jews was not even guessed at. It is clear that no conclusion can be drawn till the proportion of consanguineous marriages is known with tolerable certainty.

Even when this is known there is a further consideration to be taken into account before trustworthy conclusions can be drawn. Though we know the proportion of consanguineous marriages among Jews and the proportion of congenital cases among Jewish deaf-mutes, idiots, &c., we could not be certain of any results till we knew whether the number of children springing from such unions was more or less than, or the same as, the average number of children to a Jewish marriage. If, *e.g.*, the average fertility of consanguineous marriages was only half as much as that of ordinary Jewish marriages, the same proportion of congenital deaf-mutes as of allied marriages would indicate double as many deaf-mutes as among non-allied marriages. And if, on the other hand the fertility of consanguineous marriages among Jews was found to be double that of the rest of the Jewish population, twice the percentage of Jewish deaf-mutes might easily be found in our asylums without any prejudice to marriage between near kin.

In order to examine whether sterility was at all frequent in Jewish consanguineous marriages as is frequently alleged, I instituted inquiries and obtained information of 62 such unions. Of these only three were sterile, and omitting three cases of recent marriage we get a proportion of 5.4 per cent of sterile marriages. Now, Dr. Matthews Duncan in his standard work, *Fecundity, Fertility, and Sterility* (Edinburgh, 1866) gives the average percentage of sterile marriages as high as 16.3 (p. 193) and it is clear, even from such small numbers, that Jewish allied marriages cannot be considered sterile. And a further examination of some of the cases seemed to show that the marriages brought to my notice were remarkably fertile. In 31 families, in which the number of children living were reported to me (including the three sterile cases mentioned above and two in which the wife died in the first year of marriage) there were 144 children, besides six other cases reported as having "large family." This would

give an average of 4.6 to a first-cousin marriage. Now, if English Jews follow the law observed to hold in the case of their Continental brethren—"lower birth-rate, lower marriage-rate and lower death rate"—the average Jewish family would not be more than the average family of Englishmen calculated by Major Graham ("Census of 1861," vol. iii., page xi.) to be 2.26 and the fertility of first-cousin marriages would be double that of others among English Jews, though this is probably somewhat too high. Mr. Huth noticed similar greater fertility in such cases (p. 244) and it is probably true of all marriages between first cousins.

We are at last in a position to estimate the chances of finding the children of Jewish cousin-marriages in any collection of English Jews. We have seen that there are seven-and-a-half per cent. of such marriages and that they are probably half as fertile again as other Jewish marriages. We should, therefore, conclude that 11.25 per cent. of English Jews are the off-spring of first cousin marriages. Roughly speaking, we should expect to find a son or daughter of first cousins in any assembly of ten Jewish young men or women. It ought not, therefore, to surprise us if we found one-tenth of Jewish deaf-mutes or idiots to be the offspring of cognate marriages. The Visitation Committee of the United Synagogue, I am informed, have found it impossible to discover the origin of many of the lunatics under their charge. But Dr. Schöntheil, Director of the Jews' Deaf and Dumb Home in Walmer Road, informs me that three out of the 24 children under his charge are the children of first cousins. This is exactly the number we should have anticipated finding in any chance selection of Jewish children, and the fact rather tends to show the harmlessness of consanguineous marriages with regard to deaf-mutism than the opposite, especially as people with large families are more likely to exile the afflicted members.

But incidentally in collecting the evidence as to the fertility of these marriages, I gleaned a few facts which seem to tell in an opposite direction as regards their healthfulness. Of the sixty-two families six were afflicted by the presence of a lunatic or a deaf mute or both, a much larger proportion than could occur among Jews in general, where only about one family in forty is similarly afflicted. This might of course be due to the fact that just those first-cousin marriages which have resulted in any evil results are likely to strike the memory first, though care was taken not to direct inquiry to this point at all but only to the question of fertility. In several cases, again, ugliness was reported to be marked in the offspring of the marriages under discussion and we should probably learn to look upon want of physical beauty as a sign of bodily degeneration. The quality is, however, a "subjective" one from the reporter's point of view, and is at any rate not confined to consanguineous marriages. I also observed that the practice of marrying "in and in" ran in particular families (six families including thirteen first-cousin marriages) and seemed to pass on to the next generation, for there are no less than four "double first cousin marriages," as we might term them, the son of first cousins marrying his first cousin. Finally, I may add that in thirty-five marriages in which the surnames of both parties were known, six were same-name marriages, being about the same proportion assumed in the previous calculation. All these facts are of extremely little value except as hints for future inquiries. The smallness of the numbers examined robs them of any statistical value, and I must leave the question, for the present at least, as open as I found it.

An apology is perhaps due to the reader for leading him over so arduous a path to so unsatisfactory a goal. But until we have much more definite knowledge of Jewish vital and other statistics in England, it is impossible to arrive at any more certain results. Rash conclusions are the bane of statistics, and have led to most of their disrepute. Caution is specially desirable in the present case where any decision as to Jewish consanguineous marriages would, owing to their frequency, be crucial on the merits of the general question whether such marriages are harmful or not.

How important such a question is for English Jews may be seen from the fact that probably seven-and-a-half, and certainly six per cent. of all marriages between native English Jews are between first cousins, and that nearly one-tenth of all English Jews are the offspring of consanguineous marriages.

II.—SOCIAL CONDITION OF THE JEWS OF LONDON.

One of the most firmly rooted ideas in the popular mind is that all Jews are rich, an impression that has given rise to the phrase "rich as a Jew," which is current in all the tongues of civilization. Led by a fallacy akin to the old mercantile theory that all wealth is money, the peoples of Europe appear to have argued that because some Jews deal in money, all Jews are wealthy. Perhaps, one of the causes of the idea has been that the Jewish poor have never been a burden to the general population but have been entirely supported by the Jews themselves.

Whatever the origin of the idea, there can be little doubt of its erroneusness in so far as it implies any wide diffusion of wealth among the members of the Jewish race. Indeed, if we choose to regard them as a nation, it is probable that they are the poorest of all that can claim to be civilized; that if Mr. Giffen were to capitalise their wealth and distribute it among the seven millions of Jews, they would dispute with Ireland and Russia for the lowest place on the scale of wealth. A glance from China to Peru will speedily substantiate this statement. It will be at once allowed that the 600,000 Jews living in Africa and Asia are poor from a European standpoint. The four and a half millions who dwell in East Europe are in the vast majority only just raised above pauperism, while a goodly proportion are sunk below even that level. Among the three million Russian Jews only two or three names, like those of Gunzburg, Poliakoff and Brodsky rise about the general level of hard-working poverty. So that if we are to find the Jews who are to serve as the type of riches we must seek for them in Western Europe and America.

Turning, then, to the more favourably situated Jews in these lands, one might ask an imaginary opponent to point out the number of millionaires that are popularly supposed to abound among the Jews. In the list of American millionaires which recently went the round of the newspapers from the *New York Herald* there occurred but one Jewish name (that of Seligman Bros.) and he would have, therefore, to confine himself to this side of the Atlantic. On the Continent, besides the Rothschilds, he might point to the names of Bischoff-heim, Bleichröder, Camondo, Hirsch, Königswarter, Oppenheim, Pereire, Poliakoff, Reinach, Stern, Springer, Todesco, Warschauer, and it is doubtful whether more than five names could be added from England. Twenty millionaires, or rather firms who can act on the money market with millionaire force is not such a great proportion for seven millions of persons to include.

And, to counterbalance any superiority at the top of the scale, it is almost certain that Jews everywhere have a larger proportion of persons dependent on charity than their neighbours. In 1861 the pauper Jews of Prussia numbered 6.46 per cent of the whole Jewish population, whereas the percentage for the general population was 4.19 and Prussia was then one of the poorest European States (*Legoyt Immunités* p. 34). In 1877 the Jewish population of Amsterdam was 32,500 of whom no less than 13,000 were aided to exist by the charity of their coreligionists (*Jewish Chronicle* March 8th, 1878). Between 1875 and 1879 a benevolent society at

Furth assisted no less than 32,656 poor Jewish travellers and Furth is by no means on the highway of Europe ("Allg. Zeitg. Jud. May 11, 1880." *La question Juive* p. 18). These facts and others like them give some hints of the amount of poverty among the Jews.

From the details as to the social condition of the Jews of London which I am about to lay before the reader, it will be seen that the phrase "rich as a Jew" involves one of the popular fallacies in destroying which statistics perhaps do their most useful work. London is probably the richest Jewish city in the world; in the recent movement in favour of the Russian Jews it contributed a larger sum than any in the world, and it contains a third of Jewish millionaires. If, therefore, we cou'd calculate the average income of a London Jew, we should know the highest tidemark of prosperity to which Jews, as a body, have attained. The task may seem unattainable and the details incalculable. But "it is the beauty and glory of the statistical method," as Prof. Leone Levi says with all the enthusiasm of a specialist "that it enables us to calculate the seemingly incalculable. With this instrument at hand and with a good grip of the teaching of common experience, that which appears a dream or a guess to the uninitiated becomes to the mathematician and statistician a simple, natural, and reliable result" (*Brit. Ass. Rep.* 1881, p. 278). Without venturing all these lengths, we may hope to give some definiteness to the vague ideas at present entertained even among London Jews themselves as to their social position, and to obtain results which may be as certain and reliable as the meagre data at hand permit.

I must premise that I assume the Jewish population of London to be about 46,000 (in 1882) for reasons deduced from the burial returns and hereafter to be laid at some length before the reader. How many of these 46,000 are rich? We could obtain a maximum limit if we knew how many Jewish names were contained in such a work of reference as Kelly's *Commercial Directory*. It would then be desirable to narrow our search so as to find the number of these who were rich enough to live "up West"; this would be approximately given if we could ascertain the number of Jewish names in such a "Court Directory" as Webster's *Royal Red Book*. But the former work of reference contains some 140,000 names in the edition for 1883 recently issued, and the latter has some 85,000 addresses in the edition of 1880, which was the only one easily accessible to me. It was clearly impracticable to find what we want by going through all the 175,000 names, and in default of a better method of ascertaining the number of Jews included in these lists, the following plan was hit upon.

In the preceding "study" I ascertained the proportion of the most popular Jewish names in England to the general Jewish population, so far as this could be ascertained from lists of contributors to charities. Now, if we find the number of Jews with one of these names in any list and multiply it by the proportion which that name bears to all Jewish names, we should get the whole number of Jewish names if the proportion were accurate. Thus, if we found 25 Cohens in a list, and there are thirty English Jews to every Cohen, there should be 750 Jews in the said list. Even if the proportion were not quite accurate, and we took a number of names and treated them the same way, some of the results might be too high and some too low; but the average would in all probability approximate closely to the truth. I have applied this method to the above two works, and also to Kelly's *Court Directory*, which seems to include in its

60,000 names all persons living in a private house in the North and South districts as well as West. The results were as follows :

Name.	Proportional Multiplicand.	Webster.	Total number given by the method in Kelly Court.	Kelly Commercial
Benjamin	180	1,690	8,880	4,680
Cohen	80	1,200	1,890	8,600
Emmanuel	180	1,170	1,170	2,860
Isaac(s)	52	1,456	2,288	4,472
Jacob(s)	78	1,794	4,446	9,984
Joseph	47	1,175	1,911	2,808
Levy	85	1,865	1,750	4,760
Marks	185	1,485	3,240	8,910
Nathan	107	2,140	8,688	4,178
Solomon	68	1,188	1,860	4,818
<hr/> Average		1,466	2,507	5,056

It will be observed that some of the names, as Emanuel, give too low results owing probably to their being too largely represented in the charity lists ; others, again, like Jacobs, give too high numbers, possibly for the opposite reason. But these should counterbalance one another, and we may accept the average results as very fair approximations. It seems, then, that there are some 5,000 Jews in business in the City and elsewhere, and about 2,500 who have private houses, of whom 1,500 live in the West of London, and appear in a Court Directory. Of the latter about 300 families are probably those of professional men and retired merchants. The remaining 1,200 are doubtless rich merchants who are also included in the *Commercial Directory*. The 1,000 additional names contained in Kelly's *Court Directory*, beyond the 1,500 of the *Red Book*, may also be sub-divided into 200 professional and retired families living in the North, South and East districts, and 800 well-to-do merchants of those neighbourhoods, who also appear in the *Commercial Directory*.

Turning to the other end of the social scale, we are fortunately enabled to speak with some precision, owing to the admirably compiled statistics of the Jewish Board of Guardians. At the end of 1881 there were (excluding the emigrants of the year) 2,118 "cases" on the books who had applied during the year, 284 being chronic and 1,844 casual, the whole numbering 7,911 individuals. Besides these, there are many other poor and afflicted persons of the Jewish persuasion assisted by other institutions in London, as the following list will show :

Spanish and Portuguese Board of Guardians	...	...	...	1,296
Visitation Committee, United Synagogue	...	...	...	850
Hospital and Orphan Asylum (including 100 Apprentices)	...	...	...	815
Aged Needy ...	...	...	...	99
Blind Institution ...	...	...	...	54
Jewish Home...	...	...	...	52
Deaf and Dumb Asylum ...	...	...	...	24
"Hand-in-Hand" Asylum...	...	...	...	21
Distressed Widows...	...	...	...	18
Portuguese Orphans ...	...	...	...	12
Russian Refugees added in 1892	...	...	...	947
<hr/> Total...				8,188

We have, therefore, a grand total of 11,099 persons, who are aided by the charity of the remaining 85,000 London Jews to earn just a bare subsistence. But of these latter there are a large number, probably over 10,000, who have themselves been clients of the Board of Guardians within recent years. From 1869 to 1881, there were 9,471 "cases" who did not apply for

a whole year, and subtracting 5,632 cases who left London during the same period we have 3,839 cases in London who abstained from applying for some time. Of these we may assume that 2,500 families scattered over the thirteen years, have managed to avoid making use of its help any more. In these we have a link connecting the pauper classes with those who get their names into the compilations of Messrs. Kelly and Co. It is difficult to say how many of these get on sufficiently to have their names over their shop doors and this difficulty forms the weak link in our chain of argument, but assuming that 500 are included in the 8,000 "remanets" in the *Commercial Directory* and we have another 2,000 families not poor enough to need the aid of the Board of Guardians and not rich enough to have a shop for themselves; if we now add 1,000 individuals employed as servants and assistants in the 6,500 families above poverty we may proceed to add up our results. Before doing so we have to reduce the 7,500 families above pauperism to individuals. After careful consideration I have adopted the following figures as most suitable to the various classes, the "professional" class often including barristers, schoolmasters and families without a father at the head, the middle classes marrying earlier than the upper and the lower marrying as early but losing more children than the middle-class. The 46,000 Jews of London (1882) may be now analysed in somewhat minute detail as follows:

Class.	Position.	Families.	Average No. in family.	Individuals.
A.	Professional & retired living W.	800	4	1,200
B.	Rich Merchants, ditto.	1,200	4.5	5,400
C.	Merchants with private houses, N., S. and E.	800	4.5	3,600
D.	Professions and retired, ditto	200	4	800
E.	Shopkeepers, &c.	8,000	5	15,000
F.	Petty traders recently on Board of Guardians	2,000	4	8,000
G.	Servants and Assistants.....	—	—	1,000
H.	Board of Guardians, Casuals...	1,884 }	—	7,911
I.	Ditto, Chronic...	284 }	—	2,242
J.	Other paupers and afflicted...	—	—	947
K.	Russian Refugees.....	—	—	—
Total				46,100

Of these items H—K are certain, A—D probable, and only E—G about which there can be any serious departure from the actual state of the population.

We may now venture to conjecture, within the limits imposed by this table, the gross income of the Jewish population in London. Of the 1,500 families included in A and B there are certainly not more than 100 having on an average £10,000 a year, about 50 of whom are included in the 78 Jewish brokers of the City of London, another 30 being great merchants, and the remaining 20 families being those who gained their wealth in past generations. Some of these would have more and others less than £10,000, but this would certainly include the average. The rest of the following suggestions will, I fancy, approve themselves without remark, though strictly speaking class G need not have been included as the majority of them are paid out of the incomes of the classes above them:

A. & B.	100 at £10,000—£1,000,000	G.	1,000 at £80—£80,000
	1,400 " 1,000— 1,400,000	H.	1,884 " 50— 94,200
C.	800 " 500— 400,000	I. & K.	8,428 " 10— 84,280
D.	200 " 250— 50,000		
E.	8,000 " 200— 60,000		
F.	2,000 " 100— 200,000		
		Total ...	£8,848,480

This would give an average of £82 per head for the whole Jewish population of London. Whether this is greater or less than the average for the general inhabitants of Inner London I am unable to say. For the United Kingdom the average income per head is £33, but this counts in the Irish cottier and the Suffolkshire farm-hand, and is clearly no fair criterion. More instructive information is afforded by a less minute classification, as follows :

Class.	Sub-classes.	Numbers.	Percentage.	Average Income.
Upper	A. B.	6,600	14·6	£367
Middle	C. D. E.	19,400	42·2	54
Lower	F. G.	9,000	19·6	26
Pauper	H. I. J. K.	11,000	28·6	12

Three points come out clearly from this table which to a certain extent confirm the preceding investigation by their evident agreement with the real facts of the case : (1). The great gap between the average income of upper class London Jews and that of the middle class indicates there is really nothing answering to a middle class among Jews. A Jew is either rich or poor, generally the latter ; he is rarely content with a moderate competence. (2). The fact that one Jew out of every four is a pauper is merely putting the actual figures of the Board of Guardians and the remaining charities into other words. It seems to show that the concomitant intensity of wealth and poverty, recently expatiated upon by Mr. George, occurs also among Jews, with whom the principle, "the greater the wealth the greater the poverty," appears likewise to hold good. At the same time it must be remembered that the *clientèle* of the Board of Guardians cannot be regarded as paupers in the ordinary sense of the word. Only the 234 chronic cases fully deserve that name. (3). Finally, the large number included in the "middle" class, and the comparatively small percentage of the lower super-pauper class bears eloquent testimony to the industry, prudence, and perseverance of the ordinary Jew. Though he may not make himself rich, he will rarely fail to make himself independent.

There remains a process to be gone through with the above figures which is specially useful in a case where so much has been a matter of speculation. There is a process known to school-boys by which the result of a sum is "proved" by being arrived at by some other method of calculation. It remains to "prove" the above calculations in this sense, at least with regard to the numbers occupying the different stations of life. As for the average income of the London Jew, nothing more can be offered than the above calculation which, rough as it is, is sufficient to prove that London Jews, at least, are not as rich as Jews are generally supposed to be.

We have assumed that there are some 1,500 Jewish families in London living in the Western districts who are wealthy. Taking the seat-roll of the synagogues in those districts we have the following number of gentlemen's seats : Central, 343, Berkeley Street, 329, Bayswater, 317, West End, 218, St. John's Wood, 151, Western, 150, Maiden Lane, 98, and if we assume that 200 of the 277 *Yehidim* of the Spanish and Portuguese Synagogue live west of Temple Bar, we have a total of 1,802 seatholders. Not all of these are wealthy, though the majority probably are, and if we remember that there is a growing class of (foreign) wealthy Jews who connect themselves with no synagogue, and that some of the families under discussion have ladies at the head, it will be allowed that the estimate of 1,500

derived from the *Royal Red Book* is a sufficiently close approximation. They cannot be as many as 1,800, and on the other hand one finds in the various charity lists of the community an "inner circle" of some 600 names which are included in nearly all of them, and we have thus a maximum and minimum limit. The "upper fifteen hundred" of London Jews is rather an overstatement, than an under-estimate for the wealthy Jewish families of the metropolis.

Turning to the opposite quarter of the compass we can get some idea of the number of London Jews who live in the city and eastward from the burial returns of the United Synagogue. Of the 1,012 interments which were conducted by its officials during 1882, no less than 781 or 77 per cent. came from the Eastern or East Central districts. In the preceding estimate the lower middle, lower and pauper classes (E to K) who would in the majority of cases live in these districts, have been calculated to number 25,000 or 76 per cent., a coincidence on which, however, too much stress need not be laid as the one estimate is for all London Jews and the other only for the large body of Jews (87 per cent. of the total number) whose dead are buried by the United Synagogue. Owing to the absence of equally elaborate returns for all the synagogues no comparison can be made with the Jewish inhabitants for the Western districts though the United Synagogue returns suggest a population of about 6,220 individuals in these quarters of London, which with the Reform, Spanish and Portuguese, Maiden Lane and Western Synagogues would leave room for the 6,600 well-to-do Jews whom we have calculated to live "up West."

The figures collected for the lower and pauper classes are at once confirmed by, and explain, the large number of charity funerals which appear to have puzzled the Burial Committee of the United Synagogue for some time. During the four years, 1879 to 1882, the average percentage of charity funerals was as high as 44 per cent. Now the classes F to K which usually consist of past and present clients of the Board of Guardians make up 20,000 out of the Jewish population of London, or a little over 43 per cent. The approximation is close enough to put to flight the doubt which has hitherto existed as to the real poverty of the applicants for such funerals. Whether the percentage of "second class funerals," about 16 per cent., is equally well explained by a knowledge that the lower middle class form 32.5 of the whole is not so clear. Jews regard burial as a communal duty and often claim it as a right instead of asking for it as a privilege.

But we have a less gloomy method of checking our results than that afforded by a consideration of the burial returns. The children between 4 and 13 years of age form, roughly speaking, about a fifth of the population. If we ascertain the number of children attending the Board Schools and similar establishments, we obtain at the same time the numbers of Jews who cannot be said to be wealthy enough to justify the proverb "rich as a Jew."

The following list gives approximately the numbers of the Jewish attendants of such schools, some of the figures being for the middle of 1882, others for the beginning of 1883 :

Jews' Free, Bell Lane	2,800	Westminster Free	858
Old Castle Street	1,273	Spanish & Portuguese	353
Infant, Commercial St.	728	Jews' Orphan	215
Settle Street	519	Borough	158
Chicksand Street	450	Bayswater	150
Infant, Tenter Street	447	Middle Class, Girls	57
Stepney	892	Deaf and Dumb	24

This would account for 39,915 of the London Jewish population or 40,000 out of 46,000. Of the remaining 1,200 children of the upper or wealthy classes we can only hope to trace the 600 boys. Of these 75 are at University College, 50 at the City of London, about 30 at Clifton and Harrow, probably 150 in German or French schools and the remaining 350 must be scattered through the seven chief Jewish Boarding schools and other middle class schools like that in Cowper Street. These figures, so far from confirming our previous results, bring an element of doubt into the problem. While we have assumed 1,500 wealthy families in the West, there are also 800 well-to-do families North, South and East whose children are to be accounted for, so that out of the 9,200 children in the Jewish community, 1,900 should attend middle class and public schools, and only 7,300 Board Schools. Nearly 700 more children therefore attend lower schools than should do so if our estimates were accurate and if parents always send their children to schools appropriate to their social position. Only two alternatives can solve the difficulty; either the estimate for the wealthy Jews of London was too high, or tolerably rich Jews often send their children to schools of the grade of Board Schools. I will not attempt to decide as to which of these hypotheses answers to the facts of the case.*

Some further confirmation of the number of families in the various ranks of life may be taken from the number of male seatholders belonging to the synagogues of London. In 1881 there were 3,418 seatholders of London synagogues given in the Report of the Board of Deputies, and if we add 227 *Yehidim* of the Spanish and Portuguese congregation (not given in the report), and 329 seatholders of Berkeley Street, a total of 3,984 heads of families is obtained. This may be considered a fair proportion of the 5,500 families calculated to be above poverty; some of these and nearly all the lower and pauper class attend the *Hebroth* or minor congregations. Here again, we have an indication that the well-to-do have been credited with rather too large numbers in our estimate. And on endeavouring to identify the 5,000 names reckoned to be in the *Commercial Directory* of Messrs. Kelly and Co., I have only been successful with 3,076 names in the *Trades* and *Law* Directories contained in that compilation. This number probably represents some 2,800 separate firms and individuals, and it would not be too much to suppose that the remaining 2,200 would escape my notice by unavoidable lapses of attention in examining some 2,500 different trades and 187,000 names and still more by the impossibility of identifying names that were either too English or too German to be reckoned as Jews. However, if I may venture to be my own critic, I shall be inclined to regard the number 3,000 as somewhat too high for the class E (shopkeepers, &c.) the error being due to the very high number given by the name "Jacobs" in the *Commercial Directory*, viz., 9,984, by the method employed; removing this we should obtain as an average 4,509, which is probably nearer the truth. We may, therefore, decrease class E by 500 and increase class F (petty traders) by the same number of families who are indeed poor but have never been on the books of the Board of Guardians. I may add that class G (servants and assistants) is a very doubtful item, since so many of its constituent members

* Since writing the above the Report of the Board of Guardians for 1882 has appeared, which seems to show that about 1,800 more poor Jews has been added to the population of London during 1882 in addition to class K above. Of these some 800 or 400 would be children of the school age, and the above anomaly is to some extent explained by the increased estimate of the London Jewish population which must now be placed at something like 47,800.

would be already counted among the families of classes E and F. In a revision of the imaginary census we have been holding of the Jews in London, a Registrar would probably fix on the following "revised" figures for classes E to G :

E	Shopkeepers	...	...	2,500	5	12,500
F	Petty traders*	...	...	2,750	4	11,000
G	Servants, &c.	...	...			500

The reader may doubt whether these considerations contain any "proof" or confirmation of our previous results, but they may, at any rate, be regarded as confirmation of the statement that "it is only with classes E-G that there can be any serious departure from the actual state of the population." And even if the "revised" figures be adopted, they only serve to make the proportion of poor greater and that of the wealthy less than in the previous estimate. In the region of pure hypothesis in which this estimate has been necessarily made one must allow for a large margin of probable error and I have preferred to put two possible adaptations of the classes intermediate between rich and poor before the reader's choice. Where so much is matter of approximation it would be absurd to claim any rigid certainty.

This is all the evidence that I can adduce for the general proportion of rich and poor among the London Jews. The fact that there are no less than 47 charitable institutions supported by them at a cost of at least £37,000 per annum, may serve to confirm the general impression of the large number of Jewish poor in London. When we add the large private benevolence of well-to-do Jews, and the £70,000 contributed by them to the Mansion House Fund last year, it is probable that the estimate of £150,000 said to be distributed in charity by English Jews per annum in *Whittaker's Almanack* for 1883 (p. 200), is very near the truth for London alone, and it is rendered likely that Jews keep up the custom of spending a tithe of their net income in charity. Though only 1.22 per cent. of the population of London, they have contributed 8.8 per cent. of the Hospital Sunday Fund, among the total contributors to which they have ranked third (after the Established Church and the Congregationalists) since its foundation in 1873 (*Official Year-Book of Church of England*, 1883, p. 684). It is scarcely too much to say that one of the chief reasons why Jews are so generally reputed to be rich is because they have so many poor.

* To these there must now be added 871 cases, or about 1,484 individuals, who went off the books of the Board of Guardians in 1882.

III.—THE "FOREIGN CONTINGENT."

In the preceding investigation we have collected together all the pieces of information contained in the communal statistics and elsewhere as to the social position of the Jews of London. We may now proceed to examine more closely the causes for the large predominance of the lower and pauper classes. The larger numbers taken from the Report of the Board of Guardians scarcely require verification. But the gratuitous distributions of *matsoth* (Passover cakes) show that the number of poor is rather above than below the number there given. The Overseers of the Poor of the United Synagogue reckoned in 1882 that they had distributed *matsoth* to 2,500 families or about 10,000 individuals. If we adopt a statistical canon, which I venture to formulate, "round numbers are always above, definite figures always below reality;" these figures completely confirm the 2,118 cases with 7,911 individuals given by the Board of Guardians for 1881. But that institution gives far more knowledge of the state of the Jewish poor of London than is contained in these figures, and I shall devote the remainder of these remarks to a consideration of its statistics. This is the more incumbent upon us as we are placed in full possession of the main facts of London Jewish pauperism by the rich fund of statistics annually compiled by the Board of Guardians. That institution has admirably fulfilled the desire expressed by its founder, the late Mr. E. Alex, in his original circular dated 16th February, 1859—*"we must be, pu: in possession of the statistics of poverty"* (the italics are his). From the details given in its reports from 1869 (when the present method of compilation was in full working order) to 1881, I have compiled those figures which convey information of more general interest, omitting the details connected with the internal working of the Board, as well as the very interesting reports of its medical officers from 1862 to 1878, the information conveyed in which I must reserve for a future occasion.

The following table contains the main points of interest for the years 1869—1881 :

Number of cases	28,788	Emigrants left London	5,682
Do. natives of England	5,54	Ditto, foreign	5,007
Percentage of native cases	19·14	Lid not apply for a year (including emigrants)	9,471
New cases	10·10	Chronic cases	5,179
Percentage of new cases	84·77	Expenditure	£99,209 2 2
Foreign new cases	8,998	Average do. per case	8 8·11
Percentage of foreign to all new cases	83		

The only criticism which a statistician can make on the compilations of the Board is that *cases* have been selected for the units rather than individuals. Yet for the two main points, the total numbers and the number of emigrants, the figures for the individuals are also given, and with a little trouble one can estimate the number of individuals to each class of case as follows, for the years 1870—1881 (where the requisite details have been given) :

		Cases.	Individuals.	Average No. to case.
Total numbers	...	26,585	86,637	3.25
Emigrants left London	...	5,264	9,418	1.78
Therefore in London	...	21,821	77,219	3.62
Chronic cases (say)...	...	8,025	4,525	1.5
Therefore actuals in London	...	18,297	76,694	3.9

We shall not, therefore, be very far out if we assume that a casual case in London is equivalent to four individuals. And with this result we may turn back to the information contained in the preceding table as to the origin of the large proportion of poor whom we have calculated to live in London. If we subtract the number of foreign emigrants from that of the foreign new cases we should obtain the number of foreign poor who have been added to the London population during the thirteen years under consideration and for some seven years previous. This reaches the large total of 3,691 cases, which would include 14,764 individuals according to the preceding estimate. Now of the 2,629 cases relieved in 1881 only 467 were native English Jews, and 2,162 were foreigners, of whom 484 left the country, leaving, therefore, 1,678 foreign cases on the books at the end of that year. Subtracting these from the total number of foreign cases who have been added to the Jewish population, it is clear that at least 2,018 foreign cases have gone off the books of the Board of Guardians from 1869 to 1881, and we may now add 498 for 1882. Some of these have doubtless been removed by death, but their place has been supplied by the births among this class of the population.

The figures for 1882 which have just been issued deserve notice by themselves on account of the remarkable additions which that year has seemingly made to the poorer Jewish population of London. The main figures pointing to this fact are as follows :

Number of cases.....	2,958	Former applicants did not apply...	982
Native cases.....	448	Chronic cases	218
New cases.....	1,806	Cases added by Conjoint Committee	277
" foreign.....	1,287	" individuals	489
Emigrant cases	611	" Expenditure.....	£12,678 18 9
" foreign	581		

The excess of new foreign cases over emigrant foreigners, 706, cannot be adopted as the addition of 2,800 foreigners to the London population during last year, though it informs us of that addition to the number of foreigners within the past ten years or so. There were 699 cases who arrived during the past year; and there are doubtless many who have arrived during the last six months of the year who have been prevented from applying by the regulations of the Board. How many of these new arrivals of 1882 left during the year cannot be determined from the Report. We can only say that against 1,067 new cases of foreigners who have arrived in England during the past seven years, 528 similar cases left, leaving a balance of 559 cases or about 2,156 individuals. Add to these the 489 individuals added by the Conjoint Committee of the Mansion House Fund and we have a grand total of 2,642 recent foreigners who came within the cognisance of the Board in 1882. It is difficult to say how many of these were actual arrivals of the year but it is probable that 2,000 souls were added to the Jewish population from August 1881 to December 1882, and the total population raised thereby to 47,000.

Not alone do the reports of the Board of Guardians enable us to determine the additions to the Jewish population of London from abroad; they also

make us acquainted with the nationality of the foreign poor. At the beginning of the Board's operations, it could say "Holland continues to supply most of the foreign poor" (Report for 1861). But eleven years later things had changed, and "the poor Jews in England are now almost exclusively recruited from Poland," says the Report for 1872. This has doubtless been due to the cheapening of the fares from the Continent. German Jews have quite got into the habit of "passing on" their Polish poor to England. The change from Dutchmen to Poles is by no means an unfortunate one. Whereas the former rarely raise themselves out of a state of pauperism if they have once sunk to that level, the recuperative powers of the latter are remarkable as the fact that 1,500 have removed themselves from the books is in itself sufficient to show. Of the 7,785 new foreign cases from 1871 to 1881, no less than 6,191 or 79.26 per cent. were Poles, whereas only 3,712 emigrant cases were of that nationality during the same period, showing that 2,419 Polish Jews and their families remained in England during those eleven years. Add to these nearly 2,000 Russian Refugees and others who joined their ranks in 1882, and we have 12,000 Polish Jews added to the population of London during the last fifteen years, and these have doubtless increased to at least 13,000 in that time.

A further extension of the above figures, and we have rough means of estimating the nationality of the present Jews of London. Besides the 13,000 Poles calculated above, there have been 5,000 poor Jews from Holland and Germany (viz., 1,212 cases) added to our numbers between 1869 and 1881, and to these we may add at least 3,000 more for natural increase and the not inconsiderable number of German merchants and clerks who have joined us in those years. Of the remaining 26,000 London Jews something under 3,000 (judging from the burial returns) belong to the Spanish and Portuguese Congregation, the remaining 23,000 being native English of the Ashkenazi rite, of whom some 1,500 or so belong to the Berkeley Street Synagogue. The latter we might divide in point of origin into 500 originally Sephardim and 1,000 Askenazim. It would be interesting to know how many of these natives have joined our ranks this century. Assuming that 7,500 represent these "new natives," the remainder forming the old "English Colony," we might divide London Jews into the following categories as regards origin :

"English Colony".....	15,000.	Spanish and Portuguese
Poles.....	13,000	(including 500 "Reformers") 8,500
German and Dutch	8,000	
"New English".....	7,500	
		47,000

The Jews of London may therefore be divided into three historic classes (A) a nucleus of 8,500 descended from the original settlers in the seventeenth century—the London Jews of the past—(B) the "English colony" of some 15,000 from last century and 7,500 who have only been among us during the past half century—the Jews of the present who have mostly migrated from the East End of London, and lastly (C) the "foreign contingent" of 21,000, the majority of whom are very poor. These last will doubtless form the Jews of the future displacing B as these have wrested the hegemony from A. We can scarcely wish the last class a better fate than to progress as its two predecessors have successively done. While there are only at most 7,000 poor in the 25,000 comprising classes A and B, 18,000 out of the 21,000 forming the foreign contingent are or have been "clients" of the Board of Guardians. That the latter should succeed as

well as the London Jews of the past and present no better plan can be suggested than to follow in their footsteps and to become, as they have done, English Jews indeed. It is scarcely the function of the compiler of figures to draw the moral of his tale, but I cannot refrain from pointing out the very obvious conclusion from the above calculations that the immediate problem before the Jews of London is to Anglicise their "foreign contingent."

These results carry with them more information than the mere figures show on the surface. It is probably owing to the large mass of foreign poor unaccustomed to the English climate and conditions of life that London almost alone of all the cities of the world, has a larger infant mortality among its Jewish inhabitants than among the general population. I shall have more to say on this distressing subject later on in these Studies but meanwhile I may point to a fact recently published (for the first time) in the burial statistics of the United Synagogue. Of 507 charity funerals in 1882 no less than 411 or 81.4 per cent. were those of children under 10, whereas in England and Wales such deaths included only 48.5 per cent. in 1880. It is probable that this large percentage is caused to some extent by the inclusion of still-births in the above figures, but if we remove 50 for these the proportion remains as high as 71 per cent. As the lower death rate generally found among Jews is always attributed to smaller infant mortality it becomes probable that, owing to the large numbers of foreign poor, the death rate of London Jews is, quite exceptionally, higher than that of Londoners in general. We may anticipate that this condition will be only temporary until the "foreign contingent" has been assimilated, but it will have to be taken into account for the present, especially in drawing any statistical conclusion from the burial returns.

IV.—OCCUPATIONS.

Nothing throws more light on the character of a people than the occupations in which its members pass their lives. Nothing either expresses a man's character better or exerts a stronger influence on it than the work which fills his mind and through which he gives expression to his personality. Man's "nature is subdued to what it works in," in a wider sense than the poet's. Every occupation has its own psychology as well as its own medicine. To know, therefore, what trades a nation mostly affects, and how far its members excel in particular occupations is a long way towards discovering their peculiar aptitudes and the function they perform in the world's activity. Unfortunately both economics and statistics have done but little towards the vast work of comparative tables dealing with this subject. And with regard to the special subject here to be considered, we have only the occupations of Jews given fully and officially with regard to the population of Prussia more than twenty years ago. Engel's masterly works on the subject for later years contain, so far as I know, no reference to confession. There is no subject relating to Jews on which we know so little; as a matter of course there has been none on which so much has been asserted during the recent anti-Semitic movement. The importance of the subject, both polemically and as a guide to future improvement, has led me to collect as much as possible relating to it and to add what little I could obtain by my own research.

Though a man cannot be said to be born to a trade yet his choice of an occupation is largely determined by his birth. Mill and Cairnes have laid stress on the "four grades" into which workmen may be divided (Mill, *Pol. Econ.* II. xiv., 2; Cairnes *Lead. Prin.* I. iii. 5). A workman rarely changes his occupation, and almost as rarely does he bring up his son to another. This fixity of occupation applies with more force to the Jews, as in addition to natural inertia there have been external forces keeping them in certain grooves. The exclusion from the Guilds, the denial of rights in real property, and the church policy towards usury were enough in themselves to restrict Jewish activity within a very limited sphere. And it is almost startling to reflect how recently these restrictions have been removed, even in the most civilised lands. The North-German Confederation gave Jews complete choice of occupation (*Gewerbefreiheit*), 21st June, 1869. Austro-Hungary changed her policy towards them in 1867, and concluded the process of emancipation in 1872. Switzerland removed the barrier in 1869, Italy became free throughout its length in 1871. Even in England the *carrière ouverte* has only been given since 1859. At the present day over two-thirds of the Jewish race are handicapped in the struggle for existence by restrictions on their occupation. National character is of slow growth and equally slow to change. It would be absurd to suppose that a single generation will remove tendencies which have been the development of long centuries.

One result of mediæval restrictions has to be taken into account in the beginning of any comparative statistics on Jewish occupations. Throughout the Diaspora, Jews have been prevented from holding land, and have, therefore, had no inducement to settle in the country, and in many places

they were obliged to dwell within fixed limits, Judengassen, Ghetti, or Jewries. Besides this, their religious enactments (Mishna, Megilla I. 8,4) only permit the sacred functions of public worship to be performed in the presence of ten males above the age of thirteen, the minimum for a congregation. This involves that at least forty souls should dwell within accessible distance. This consideration at once explains the fact to which Andree (*Zur Volkskunde der Juden* p. 256) calls attention to as something remarkable, that only one-sixth of the Jewish population of Prussia in 1871 dwelt in villages where their numbers were under fifty souls.

The above historic and social causes are quite sufficient to explain the very large proportions of Jews who live in great cities. I have been able to ascertain the Jewish population of seventy-nine cities which contain over 5,000 Jews and these include about 1,250,000 Jews or about 17.4 per cent. of the Jewish population of the world. As these cities again have a collective population of 24,000,000 the average percentage of Jews in some of the greatest cities of the world is just over 5 per cent., a fact which may, to some extent, account for the large share they receive of the world's attention. I may add that 463,000 Jews live in the eight capitals, Warsaw, Vienna, Pesth, New York, London, Berlin, Paris, and Amsterdam. Thus every sixteenth Jew dwells in one of these great cities where, on the average, every twentieth person is an Israelite. In England 75 per cent. of English Jews dwell in the metropolis, which only contains 15 per cent. of the general population. In the United States twenty-one cities contain 185,000, or 80 per cent. of the 230,000 Jews who are scattered over more than a thousand towns of that country. In Vienna, Jews formed 7.2 per cent. of the population in 1880 as against 6.6 per cent. in 1869; in Berlin from 1867 to 1875 they increased from 3.7 per cent. to 4.7 per cent., causing Hotprediger Stöcker to utter his celebrated cry, *Das ist zu viel!*

These facts may be supplemented by the following more general statements of the proportions of urban and rural populations among the Jews. Dr. S. Neumann (*Die Fabel von der jüd. Masseneinwanderung*, p. 65) gives the following percentage of Jews living in the open country in Prussia, to which I have added, after Jannasch, the proportion of the general population:

Older Parts	New Possessions	Together	General Population [Jannasch]
1849 20.85	—	—	78.48
1858 21.75	—	—	70.89
1867 19.78	89.88	22.88	68.70
1871 18.41	84.89	21.90	67.67

Here the decrease in the rural population is not so very marked, but the small proportion compared with the general population is noteworthy. In countries where the Jewish population is smaller, the contrast is more striking. Thus in Saxony in 1880 while 72 per cent. of the general population dwelt in the country, only 3 per cent. of Jews lived away from towns (*Statist. Jahrb. für Sachsen*, 1883, p. 5.) At the last census of Victoria in 1881 the percentages of the population were as follows (*Census of Victoria, pt. iii., Religions of the people*):

	Cities, towns, &c.	Shires	Outside local jurisdiction
General	50	49	1
Jews	98	7	0

I have laid stress on this aspect of Jewish life because in many ways it forms the key to their occupations and at once renders nugatory any comparison between the general statistics of occupations and those relating to

Jews. It is absurd to expect a man who lives in Paris, Vienna or Berlin to tend sheep or dig up coal ; we must compare Jewish occupations with those of the town dwellers. The mere fact that they tend towards large towns in ever increasing numbers is by no means peculiar to them ; it is a constant feature in modern statistics. Thus while in 1801 there was one Londoner to every 17 Englishmen, one Parisian to every 49 Frenchmen, and one inhabitant of Berlin to every 57 Prussians, 75 years later there was in 1876 a Londoner to every 9, a Parisian to every 18, and a dweller of Berlin to every 21 inhabitants of their respective countries (*Uettingen Moral Statistik*, p. 382). There is nothing in modern life which is likely to attract Jews more into the country than their neighbours. The reasons why they were forced in the past to prefer the *rus in urbe* are too well known to need more than a reference to Pfarrer Rost's admirably compiled little brochure, *Die Berufsthatigkeit der Juden* (Alzey, 1880), admirable alike for the industry with which it is compiled and the spirit which led a Protestant clergyman to its compilation. We have then to regard the Jews only or mostly as town dwellers in considering their occupations. It will concern us later on how far this point of view accounts for their larger proportion of mentally and physically afflicted, their smaller bodily size, and the general "movement" of the Jewish population. It also accounts for the smaller proportion they afford to the continental armies. Thus, though $\frac{1}{10}$ of the Austrian population, they afforded only $\frac{1}{8}$ of the standing army in 1880, although their numbers had doubled in the forces since 1869 while the rest of the population only increased their contingents 11 per cent, (Schimmer *Die Juden in Oesterreich nach Zahlung von 1880*, Statist. Monats. 1881). Wappäus, and even long before him Sully, noticed the much smaller contingent given to standing armies by the urban population. When we add that in Prussia no Jew can attain to the command of a regiment, by custom if not by law, it is easy to understand that the profession of arms is not popular with the Jewish population of that kingdom. Thus in 1864 the Jews formed only 0.47 per cent of the Prussian army (Frantz, *Hildebrands Jahrb.* 1868, p. 45), though they formed 1.40 of the population. In England on the other hand where, as we shall show, the physical powers of native Jews are superior to the general average of Jews, there are said to be 2,000 Israelites enrolled in the volunteer corps (Dr. H. Adler, *Nineteenth Century*, April 1878), and as this numbers 200,000 in all, they contribute a proportion much larger than their numbers as compared with the general population.

The general problem of Jewish occupations is to discover what are the trades, &c., peculiar to townsfolk which are most affected by Jews. It will be found, I think, that in a large majority of instances the occupations are determined by their religious needs. Thus, butchers are required for *kosher* meat, and many Jews are therefore found in a trade seemingly alien to their general character, and generally adopted by persons born in country neighbourhoods. Printing and bookbinding are also branches where the sacred has led on to the secular application of those industries. The opportunities given by the fruit and tobacco trades for avoiding a second Sabbath account for a large predominance of Jews in these trades. And, as a general principle, those trades are most favoured by Jews which afford them opportunities for arranging their own time for work, and leaving them free for their festivals and religious duties generally. Piece-work rather than time-work, domestic industries rather than factory work, in fact occupations in which they can be, to a certain extent, masters, would naturally be chosen

by a people whose holydays differ from those of their neighbours. Add to this certain natural tendencies, heightened by historic causes, towards private banking and international exchange, and the chief occupations of the Jewish race are accounted for.

The only collection of data on the occupations of Jews that has been hitherto made is that of R. Andree (i.c. pp. 191, 192), culled from various travellers, chiefly in lands outside Europe. I reproduce it here, adding the name of the authority given by Andree in different parts of his book :

Country.	Authority.	Principal Trades.
Morocco	Maltszan	Dealers, brokers, handicraftsmen, interpreters, carpenters, tinsmiths, tailors, bootmakers.
	Mohrfs	
Algeria	Schneider	Money-changers, jewellers, linendrapers, pawnbrokers, speculative builders.
Egypt	Lüttske	Money changers, bankers, jewellers, merchants, hawkers.
Aisa Minor	Scherzer	Servants, porters, merchants.
Damascus	Petermann	Bankers, merchants, shopkeepers, pedlars, bakers, painters, butchers.
Bagdad	<i>Allg. Zeitung</i>	Merchants, shopkeepers, money-changers, goldsmiths, pedlars, weavers, bootmakers.
Kurdistan	Layard	Petty traders, shepherds.
Arabia	Maltszan	Armourers, silversmiths, masons, butchers.
Persia	Polak	Silk spinners, glass grinders, goldsmiths, jewellers, hawkers, clotheamen.
Turkestan	Radloff	Silk merchants, painters, brandy distillers, commissionaires.
India	Graul	Agriculturists, oil manufacturers, soldiers [Beni Israel].
Hungary	Schwab	Merchants, hawkers, physicians, journalists, pedlars, innkeepers, photographers, musicians, packers, handicraftsmen.
Constantinople.	Rigler	Merchants, hawkers, gold changers, physicians, apothecaries, dentists.
Bulgaria	Kanitz	Corn dealers, hide and silk merchants.
Bosnia	Maurer	Handicraftsmen, pedlars, usurers, interpreters, cashiers.
Caucasus	Tcherny	Leathermakers, dealers, tobacco and wine merchants.
Russia	Tchubinsky	Butchers, carriers, cap and shoemakers, tailors, a few smiths, locksmiths, glaziers, carpenters, musicians, agents.

This list clearly contains merely the personal impressions of sixteen travellers, who naturally report the results of their own experience—a most fallacious guide as regards the extent of Jewish occupations, though probably fairly accurate in determining the trades in which Jews are particularly conspicuous. Yet even as it stands, it testifies to a far wider spread of handicrafts than is usually allowed by anti-Semitic pamphleteers, who very probably never handled a hoe or a hammer in their life. And not alone is there abundant evidence of hard manual labour among Jews, but Andree's authorities testify to considerable success at such callings. "The only good workmen in the city are Jews," says Hamilton of Tripolis (Andree, p. 204); in Arabia, Maltszan reports "they are clever at all kinds of handwork" (*ibid.* p. 222). Of the Russian Jews Tchubinsky grants that "they are prized as workmen owing to their zeal and cleverness" (*Globus*, 1880, p. 377), and the Governor-General of Kowno gives an equally favourable account of the 10,665 Jewish artizans who monopolise the handicrafts of his Government. (*Jewish Tribune*, San Francisco, 2nd Feb., 1883).

Wherever we can supplement the above list by actual statistics, it is seen to be woefully deficient as regards the number of handicraftsmen found everywhere among Jews. Thus Mr. Sydney M. Samuel gives a list of 416

Jerusalem Jews pursuing 29 handicrafts, of which the following were the most favoured. (*Jewish Life in the East*, p. 78) :

Tailors	...	...	...	...	87	Watchmakers	...	...	...	...	20
Joiners	...	...	...	...	65	Parchment Manufacturers	...	...	...	...	18
Shoemakers	...	...	...	...	60	Turners	...	...	...	...	15
Tinkers	...	...	...	...	82	Bookbinders	...	...	...	...	14
Goldsmiths	...	...	...	...	27	Masons	...	...	...	...	10

We might also contrast Petermann's meagre list for Damascus by Mr. Fresco's analysis of the handicrafts of 882 heads of Jewish families in that city, of whom no less than 650 are weavers (*Eleventh Report of Anglo-Jewish Association*, p. 78). Or, again, in the *Report of the Liverpool Commission of the Mansion House Fund* (Table 2, "Trades and Callings," p. 10), of 1,843 heads of families of Russian refugees, whose occupations are tabulated, only 19 were dealers, 42 clerks, 21 chemists, and 31 students, the remaining 1,730 being divided among 26 handicrafts among which the order of preference was as follows :

Agriculturists	...	...	...	...	424	Brewers	...	...	...	...	21
Labourers	...	...	...	...	274	Watchmakers	...	...	...	...	20
Tobacco workers	...	...	...	...	189	Millers	...	...	...	...	19
Tailors	...	...	...	...	129	Glaziers	...	...	...	...	14
Joiners	...	...	...	...	110	Ropemakers	...	...	...	...	12
Shoemakers	...	...	...	...	97	Tanners	...	...	...	...	12
Tinsmiths	...	...	...	...	91	Furriers	...	...	...	...	11
Butchers	...	...	...	...	67	Saddlers	...	...	...	...	11
Metal workers	...	...	...	...	61	Soap-boilers	...	...	...	...	9
Painters	...	...	...	...	46	Hairdressers	...	...	...	...	7
Bakers	...	...	...	...	84	Textile workers	...	...	...	...	7
Machinists	...	...	...	...	80	Masons	...	...	...	...	4
Jewellers	...	...	...	...	28	Coopers	...	...	...	...	3

A still more instructive example of Jewish industry is afforded by the comparative list of handicraftsmen at Bucharest extracted by the *Times* correspondent from the *Fraternitatea*, a local journal (*Jewish Chronicle*, Sept. 5, 1879). The number of Roumanians and Jews respectively in various trades was as follows :

	Roum.	Jews.	Roum.	Jews.		
Tinkers	...	61	729	Woodturners...	45	61
Tailors	...	76	689	Cabinetmakers	83	57
Painters	...	215	854	Bookbinders	41	42
Braiders	...	97	251	Lampmakers	4	48
Silversmiths	...	48	164	Hatters	17	28
Watchmakers	...	48	112	Brushmakers	0	18
Coppersmiths	...	84	65			

And in all 3,880 Jews were engaged in manual labour in hardworking trades against 1,481 Roumanians—a curious commentary on the stock arguments of the anti-Semites of that Principality.

Even in centres of commerce like the great capitals we find large numbers of Jews working with their hands, as may be instanced from the following tables.

	Pesth, 1870 (Körös)		Vienna, 1869 (Jeittees)
Tailors	1,688	...	505
Shoemakers	816	...	119
Carpenters	75	...	59
Turners	28	...	95
Locksmiths	106	...	56
Upholsterers	116	...	58
Painters	140	...	10
Jewellers	238	...	170
Watchmakers	57	...	55
Bookbinders	88	...	54
Butchers	120	...	81

In all 4,791 Jews were engaged in industry out of 21,071 adult workers in

Pesth, and 4,878 out of 26,894 in Vienna; while in 1870 at Berlin, 3,725 out of a possible 16,582, were engaged in various industries, the details of which in Schwabe are not sufficiently explicit to run parallel with the above.

Some further evidence of the aptitude of Jews for handicrafts may be taken from the action of the various benevolent bodies in apprenticing Jewish youth. Thus the Jewish "Handwerkverein" of Vienna had in 1879 422 apprentices of whom 84 were locksmiths, 58 shoemakers, 37 carpenters, 20 turners and 20 bakers, while among the rest none were being trained as tailors—an omission worthy of example (Rost 1. c. p. 46). The last *Bulletin* of the *Alliance Israélite* (Ser. II. No. 5, p. 16, Sept. 1882) gives the following trades to which 306 Jewish youths were being apprenticed under its auspices at various towns in Asia Minor and North Africa:

Bootmakers	67	Blacksmiths	10	Writers	5
Carpenters	50	Masons	10	Barbers	4
Tailors	49	Saddlers	9	Coopers	4
Weavers	20	Bookbinders	8	Dyers	8
Plumbers	19	Chemists	5	Watchmakers	2
Lithographers	18	Painters	6	Engraver	1
Goldsmiths	18	Tinkers	6		

And here in London the Jewish Board of Guardians is now training 218 apprentices to no less than 69 different trades of which the most popular are: cabinet makers 28, bootmakers 17, jewellers 12, upholsterers 13, tailors 10, and wood carvers 9. (*Report* for 1882).

The one common characteristic of the above lists is the predominance of tailoring as the favourite occupation of Jewish labourers. This trade fulfils all the requirements we have noted above as being needed for Jews; it is in the main a domestic industry in its lower forms, and enables a man to command his own hours of work. On the other hand, it must be remembered that the clothing industries, for reasons which Hushofer points out (*Lehrb. d. Statistik*, p. 200), are "the most numerously represented of all industries," and the only difference between general and Jewish statistics in this respect is that, generally, shoemakers outnumber the tailors.

The above examples, including details of no less than 30,918 Jewish handicraftsmen, are amply sufficient to prove the wide extent of manual labour among Jews. It remains to investigate what proportion of Jews live as artizans as compared with other modes of occupation. For the Jewish population of whole countries I have only been able to obtain details with regard to this for Prussia for 1849 and 1861. I take the following from an anti-Semitic work *Israel und die Gojim* 1880 p. 57, after having checked the figures for 1861 from Engel in the *Zeitschr. des Preus. Statist. Bur.* Bnfd 3, p. 43. The total numbers only include those capable of earning a livelihood ("Erwerbsfähig"):

	1849.	1861.		1849.	1861.
I.—Trade.	28,518	89,621	II. Physicians and teachers...	1,610	2,086
a. Bankers & money-changers	814	560	III. Mechanics and handi-craftsmen ...	...
b. Wholesale merchants	1,002	2,785	IV. Farming ...	12,054	11,445
c. Retail do.	6,528	9,736	V. Gardening, &c. ...	582	648
d. Agents, pawnbrokers	1,444	2,083	VI. Brewers ...	85	26
e. Victuallers and hucksters	2,887	3,003	VII. Lower communal officials	828	808
f. Pedlars	1,054	1,209	VIII. Hired labourers...	586	949
g. Dealers	5,288	4,814	IX. Servants ...	2,588	2,106
h. Wandering dealers	3,664	4,699	X. Living on income ...	6,000	4,814
i. Assistants ...	5,582	9,852	XI. Paupers ...	1,677	2,992
j. Cattle traders	806	988	Total...	59,479	62,705

Thus we see that every fifth Jew in Prussia in 1849 and every sixth Jew in 1861 obtained his livelihood by a handicraft. Rost, by adding together classes I. (j.) IV. V. and VI. and half of VIII. and IX., finds that 7 per cent. of Jews in 1861 lived by agriculture, and adding the other half to class III. he obtains 18 per cent. as handicraftsmen, and adding to these I. (h) and VII. and a certain proportion of I. (i), he arrives at a grand total of 38 per cent. of Jews who earned their living by their hands and not their heads in 1861. From the figures for 1861 Legoyt (*Immunités* p. 34) has given a comparative list of the occupations of Jews and others which is very instructive. I add the similar list for Italy given by Cavaliere Servi in his work *Gli Israeliti d'Europa*, 1872, p. 304, for which however no reference is given. The third column gives Servi's results with the omission of the four last rubrics for better comparison with Legoyt's:

	Prussia (adult workers).		Italy.		Italy (adult workers).	
	Jews	Others	Jews	Others	Jews	Others
Agriculture ...	2·18	48·58	0·1	85·6	0·8	58·0
Industry ...	18·97	89·41	4·0	14·0	12·5	22·8
Commerce ...	57·98	5·17	17·7	2·8	55·8	4·8
Service ...	6·78	8·25	1·6	2·7	5·0	4·5
Professions ...	8·55	2·15	2·8	2·4	8·7	8·7
Independent ...	4·18	2·80	5·6	2·7	17·8	4·5
Pauper ...	6·46	4·19	0·8	1·4	0·9	2·2
Army...	—	—	1·4	1·1	—	—
Religion ...	—	—	0·8	0·7	—	—
Administration ...	—	—	1·2	0·6	—	—
Without occupation.	—	—	65·0	86·0	—	—

The points in which the two lists agree are (1) the very small proportion of Jews engaged in agricultural pursuits, (2) the remarkably large percentage who follow commercial callings, (3) the greater proportion of Jews engaged in the professions, and (4) in service than the Christians, and the (5) larger number of independent persons among the former and (6) of artizans among the latter. The lists only disagree in one point—the amount of paupers among the Jews which is higher in Prussia than the rest of the population but lower in Italy. This may be accounted for by the fact that many admitted into the former class in Prussia are included under the rubric of "without occupation" in the Italian calculation. Servi accounts for the enormous proportion of Jews which comes under this heading by the fact that women and children are included in the estimate, and that Jewesses, unlike Italian women, do not engage in work. It is noteworthy that in Italy Jews have a larger proportion of men in the army and in official positions than the rest of the population—a result which would certainly not apply to Prussia nor probably to any other country in the world.

With regard to the small proportion of Jews engaged in agriculture, this is, as we have already remarked, synonymous with the large proportion who live in towns. To eliminate this element we must resort to the occupation statistics of large towns—a branch of statistics that has only been extensively cultivated within the past twelve years. During this period details of interest have been published as to the occupations of Jews and others in Berlin, Vienna, Pesth, and Leipzig. In H. Schwabe's *Die königliche Hauptstadt Berlin im Jahre 1871* elaborate tables are given of the occupations of Catholics, Protestants, Jews, and Nobles (p. 100)—so elaborate, indeed, that it is with great difficulty that one can arrive at any really comparative results. Schwabe draws a distinction between work-

givers ("arbeitgeber") and work-takers ("arbeitnehmer"), according to which 36.7 per cent of Catholics are work-givers, i.e., employ others, or at any rate do not use their hands, 38.7 per cent. of Protestants, and no less than 71.8 per cent of Jews, who thus seem to approximate to the *otium cum dignitate* of the Nobles, 90.2 per cent. of whom are work-givers (*Ibid* p. 99). These figures were quoted with much effect during the anti-Semitic movement by writers and speakers who conveniently ignored the information given in an earlier part of the book (p. 55), according to which 76.5 per cent of those engaged in commerce are necessarily "workgivers" i.e., use their brains rather than their hands in their daily work. The charge thus resolves itself into the comparatively harmless one, that a very large proportion of Jews are engaged in commercial pursuits. Schwabe draws up tables of occupations separately for "work-givers" and "work-takers." By reducing these to their proper percentages and combining the two tables, I have brought his results into a form in which they run tolerably parallel with the table given by Jeitteles in his valuable work, *Die Cultusgemeinde von Israeltiten su Wien*, 1878, the figures of which are based on the census of 1869, and refer to the 26,894 Jews above 15 living at that date in the Austrian capital. I would add that Schwabe comes to the conclusion (p 101) that Jews only afford 2.7 per cent. of work-takers, whereas they formed 4.4 per cent. of the population of Berlin—a result which is again only equivalent to emphasising the large proportion of Jews engaged in commerce. Another result of his of some interest is that 8.4 per cent. of Jewish workers are under 14, whereas this age includes only 1.8 per cent. of the general population.

	Berlin, 1871.			Vienna, 1869.		
	Jews	All	Jews	All		
Agriculture	0.2	0.8	...	—
Industry	21.4	57.2	16.27	41.28
Commerce	61.4	15.4	38.11	11.46
Service	0.2	6.4	5.11	16.18
Health	2.9	0.8	1.81	0.78
Education	1.2	1.0	1.45	0.86
Art and Literature...	1.8	2.0	1.02	0.86
Religion	0.5	0.2	—	—
Justice	1.6	4.1	0.59	0.83
Army	0.7	7.4	—	—
Independent	8.1	4.7	6.64	6.64
Officials	—	—	0.71	2.54
Students	—	—	7.89	2.54
Private Schools	—	—	6.80	1.48

This table confirms the results previously obtained as regards the greater proportion of "business men" and of persons living on their income among Jews and their less proportion of artizans. The superiority of numbers in the professions disappears to a considerable extent, at least in Berlin, and in both lists the number of Jews employed in service is apparently smaller of than in the general population — religious difficulties, in my opinion, standing in the way of an occupation in which the religious observances could not be properly carried out.

For Buda-Pesth we have details given of the occupation of 21,071 adult Jews out of the 89,384 who inhabited that city in 1871; these are given in the admirable work of Körosi *Die königl. Freistadt Pest im Jahre* 1870, his similar work for 1880 not having reached its third division which is to deal

with occupations. From the elaborate details given I compile the following table for comparison with the above :

Agriculture	...	...	...	0·6	Education	...	...	...	0·6
Industry	...	...	...	22·9	Art and Literature	...	...	...	0·5
Commerce	...	...	...	22·8	Independent	...	...	...	1·0
Service	...	...	...	9·8	Paupers	...	...	...	24·2
Officials	...	...	...	0·7	Scholars	...	...	...	11·0
Medicine	...	...	...	0·7					

The details are not sufficiently well arranged to admit of easy comparison with other creeds, but we have the general result that while every fourth Jew is engaged in commerce, only one twenty-fifth of the general population engage in business, and service attracts one-twelfth of Jews against one-eighth of the remaining creeds. One-thirteenth of Jews were tailors, one-eighteenth daily labourers. Jews have the highest proportion of all creeds among the following occupations (i. id. p. 120) : goldsmiths, commerce of all kinds, tailors, upholsterers, accountants, insurance agents, medical men, students and beggars. The large item allotted to the latter class in the above list probably includes many women without occupation, as in the Italian calculation given by Servi. The details given by Hasse for Leipzig in 1875 (Andree pp. 189 and 190) merely confirm the general result of the large proportion of Jews engaged in business, and as they only numbered 2,551 in all at that date (a fact discreetly omitted by Andree), I have not thought it worth while to investigate the case more minutely.

The chief result which comes out from all these lists is the large proportion of Jews who devote themselves to commerce. From a rough calculation based on data given by Haushofer I should conclude that 18 per cent. of all Prussian Jews are engaged in commerce, against 6 per cent. of the *town* population of that country, 18 per cent. Jews against 7 per cent. in Italy, and, judging by Buda-Pesth, 14 per cent. against 4 per cent. of the *town* population of Hungary. Thus it would appear that Jews are three times as numerous in commerce as their neighbours who dwell in towns. If we might extend this conclusion to the great centres of commerce we might say that 15 per cent. of commercial men were Jews in those towns where the Jewish population reaches, on an average, to 5 per cent. It is scarcely necessary, writing in a great commercial country like England, to argue that this characteristic of Jews is by no means to be deprecated. Unless commerce is to be regarded as criminal, Jewish devotion to commercial pursuits cannot be cast in their teeth. German anti-Semites would do well to read the admirable section on "the economic function and importance of commerce" in Lexis' treatise on "Handel" in Schönberg's *Handbuch der Polit. Oekonomie* (pp. 1063-88).

From a Jewish point of view, however, it is desirable to point out that this general training to commerce on the part of Jewish parents is a policy of doubtful utility in the present condition of the world's commerce and especially as regards its lower grades. With the increase of communication and (on the Continent) of the facilities of the parcels-post, the functions of the middleman are gradually becoming less necessary; the hawker and the general dealer are being weeded out by the co-operative store. Mr. Goschen in his recent paper read before the Institute of Bankers (*Times*, April 19th 1883), pointed to the diminution of the class of middlemen as a characteristic of the age. In the early part of the century, the function of the middleman was undoubtedly important, and the Jews had long previous experience in enabling them almost to monopolise this branch of business, and in less-developed Eastern Europe

the same may be the case to-day. And similarly, in the manufacturing trades, a change has come adverse to the general nature of Jewish business. The days of "little masters" is over; the development of machinery has signed their doom, and, nowadays, one can earn better wages as a foreman than profit as one's own master. Especially in the clothing industries, which are so favoured among Jews, as can be seen from the above lists, the tremendous competition has lowered profits till the old-fashioned tailor or bootmaker is ousted out of the market by men who take to those easily learned pursuits to earn a bare livelihood.

For these reasons, and taking into account the Jewish custom of early marriage which by itself would tend to lower their standard of comfort I am inclined to think that the material prosperity of the Jews *as a whole* has declined since the beginning of the century rather than risen, and has certainly not shared in the very general advance of the general population of European countries. I have already given some evidence of the large amount of pauperism among the Jews of Prussia, Amsterdam, Pesth, and London. I may add that in Vienna, Jeitteles reckons that 60 per cent. of the Jews are poor, and this is carried out by some interesting figures given in his book as to the number of rooms in which Jewish families dwell (l. c. p. 70), 43 per cent. having only two rooms or less, 17 per cent. more living in three rooms, while only 7.8 dwelt in a rich style, and 3.46 "voluptuous" (p. 71). I observe that Justizrath Makower in an interesting lecture on the condition of the Jews in Berlin comes to a similar conclusion as to their greater poverty as compared with the general population (*Unsere Gemeinde* 1881, p. 18.) Tchubinsky, who conducted, on the part of the Government, a scientific investigation into the condition of the people of Southern Russia calculated the average income of a Jewish family in the Ukraine at 290 roubles (under £30) and found over 20,000 Jewish mendicants in the Eastern Ukraine (E. Réclus *Nouvelle Geographie* Tome V. p. 518) while in Berditchew, the "Russian Jerusalem" he found 5,000 families (?) without occupation (*Globus* 1880 p. 346). The general impression opposed to this conclusion is due to the fact that Jews support their own poor and is derived from isolated instances of large fortunes made by Jews which strike the imagination. Even in the matter of great wealth, it is doubtful whether Jews have been so successful as is generally thought. The great fortunes of the day are made either by manufacture or on the Stock Exchange. Now in the former Jews have been rarely successful. Poliakoff, the Russian railway king, is an exception proving the rule, unless we grant that Strousberg, the Napoleon of industry, as he used to be called, deserved mention here as having made a fortune if he afterwards lost it. It is to the twenty millionaires or so who have "made their heap" on 'Change that the general impression of Jewish riches is due. Thus, in the list of persons leaving at their death over a quarter of a million personality during the years 1878-82 which was given in the *Spectator*, 1st May, 1883, out of 267 names only 11 were Jews, two only nominally so by birth. Of these eleven no less than 7 had gained their fortune in connection with the Stock Exchange, three from the clothing trade and one from the proprietorship of a newspaper.

Finally, to remove another misconception as to Jewish occupations, one may notice the absence of all signs in the above investigations of the occupation which is so frequently associated with the name of Jew, viz. that of usury. This profession, it is true, is generally modest and hides itself under the title of banking, general dealing and so on, and is even associated

with the clothing trade. But the number of these in the large towns is by no means so great as to characterise the whole body of Jews. And wherever investigation can be made it is found that though money-lending is probably more frequent among Jews than among other "business" men, yet it is only an inappreciable number who make their living by it. Thus, out of the 2,562 heads of Russian-Jewish families which passed through Liverpool in 1882, only seven could be identified as coming under this category.

Note.—Before leaving the question of occupation we may revert to the number of Jews in Continental armies. In 1881, the Russian Jews contributed 8,778 recruits to the army, out of 224,470 (*Standard*, 2nd April, 1883) and in 1882 6,210 more were added to these (*Jewish Chronicle*, 15th April, 1883). As the term of service is seven years this would give a minimum of 85,000 Jews in the Russian army. In 1880 there were 7,652 Jews in the Austro Hungarian army (*Bratteevic Statist Monats*, 1881, p. 417) and there cannot well be less than 3,500 in the German army. Adding another 500 for Jews in the French and Italian armies and we have a grand total of 46,652 Jews under arms at the present moment.

V.—OCCUPATIONS OF LONDON JEWS.

It would be extremely desirable to supplement the general statistics of Jewish occupations given in the preceding paper by more special details as to the callings and professions of London Jews. Unfortunately the English metropolis stands almost alone among the great cities of the world in being without a statistical bureau ; and we should seek in vain for any official numbering or classification of the various classes of Londoners. Debarred from a full and official account of the occupation of the inhabitants of London like those we have of Berlin, Buda-Pesth and Vienna, we must content ourselves with the opportunities for obtaining this knowledge afforded by private enterprise. In the huge compilation of Messrs. Kelly and Co., entitled the *Post Office Directory*, 1883, and familiar to every merchant, there is a Trades Directory giving the principal representatives of some 2,500 trades, callings and professions, which forms the only available substitute for the trade statistics of London. If we could determine the number of Jews whose names appeared in each of these various trades we should obtain a very fair indication of the chief divisions in which the business energies of London Jews (masters) are turned. The following investigation is based on an examination of these lists in which an attempt has been made to identify the Jewish names.

The method of procedure was as follows : A dozen of the most common Jewish names including 877 firms were selected and the occupations attached to them in the Commercial Directory were classified. It was assumed that these would give the occupations, about 120 in number, in which Jews "most do congregate." These trades were now carefully examined in the Trades Directory and the number of Jews in each was determined as far as possible by the character of the names. The same process was afterwards repeated somewhat more cursorily with all the remaining trades, 224 of which yielded some further results. The whole investigation rests upon the success with which Jewish names can be identified as such, and upon this subject a few words seem here necessary.

In any country but England, the fact that a person possesses a biblical surname would be sufficient to identify him as a Jew. In England however, Puritanism has caused the adoption of biblical names by dissenters to some degree, and we thus find among the ancestors of Mr. John Bright the name of Martha Jacobs which has caused him to be credited, quite erroneously, with possessing Jewish blood in his veins. These Biblical names have been mostly adopted direct from the Bible and preserve the original forms, Abraham, Jacob, Samuel, &c. For some unknown reason English Jews when adopting a surname (for among themselves they are only known as the sons of their father, e.g., Almoni ben Peloni would have a son Jacob ben Almoni, whose son might be Joseph ben Jacob and so on without any constancy of surname) have taken the Biblical names in a quasi-plural form, e.g., Abrahams, Jacobs, &c. Any names of this type as well as the less frequent Biblical names could be at once identified as Jews of the "English colony." One name, and that the most frequent amongst English Jews, is also very frequent among Englishmen or rather Welshmen. This name "Davis" (— Davids) may have been adopted by a kind of "mimicry" so that its bearers might escape that instant identification as Jews which is usual

with the more pronounced surnames. The recent fashion of change of name to an English one of similar initial (*Of. supra*, pp. 4, 5) is also due to "mimicry."^{*} But as we have already seen, a large majority of the Jews in England are of foreign extraction and we find traces of this in their names. The names of German Jews have in most cases been made and have not grown: they therefore bear the marks of manufacture upon them, as Rosenthal, Königs-warter and the like. But there are many German Jews with perfectly Teutonic surnames which would thus escape identification. In many of these cases however the first names were Biblical and thus were identified as Jews by means of their "Christian" names. On the whole therefore I am inclined to believe that, with the general acquaintance with Jewish names one obtains by looking over charity lists and the like, but few Jewish names evade recognition to a careful inquirer, the chief danger being that of including non-Jews who have Jewish or quasi-Jewish names. Another aid to identification may be mentioned here as giving a hint as to the manners and customs (*Uulturgeschichte* the Germans term it) of English Jews. A very large number of Jewish names were those of ladies, and whenever the name itself was doubtful the fact that it was that of a widow often determined me on including it. Jewish women appear either to have more independence or to marry again less often than their countrywomen of other creeds.

The method of determining the shares of different classes of Englishmen in various occupations, &c., by means of the nature of their surnames has been previously applied by Dr. John Beddoe, the eminent anthropologist. In a paper on "English Surnames from an ethnological point of view" read before the Anthropological Society of last year and reprinted in its Journal for November, 1882, Dr. Beddoe examines and classifies various lists including some 15,261 names and among them has included names of Jewish type which occur in the following proportions:—

Nature of List.	No. examined.	Percentage of Jewish names.
Peers of England	483	0·0
Baronets	684	1·8
Magistrates of Gloucester, Hereford, and Somerset	450	0·6
Members of Parliament, England & Wales	500	2·8
F.R.C.P.s.	815	0·0
Royal Society	500	1·6
University Club	1,159	1·6
English Mayors and London Aldermen	500	1·0
Q.C.'s and Serjeants	205	2·9
K.C.B.'s and K.C.M.G.'s	290	0·0 [†]
Subscribers to a Yorkshire book	885	0·2
Bristol—Museum	684	1·6
" Merchants	250	0·8
" Lower Trades	1,000	0·7
" Infirmary, In patients	250	0·4
" Out-patients	1,000	0·2
" Offenders	100	0·0
Farmers, West of England	8,055	0·0
Quakers, South and Mid-England	2,111	0·0
" Newcastle	990	0·2

* It may be necessary to explain this term for the sake of the ladies and the country members "Mimicry" is a technical term used in natural science to express the devices by which insects and small animals adopt colours and forms resembling their surroundings so as to escape the notice of their enemies. Thus there is a 'walking leaf' insect which cannot be distinguished from a leaf and thus escapes destruction.

† Sir Saul Samuel was created K.C.M.G. just before the appearance of Dr Beddoe's paper.

As these proportions would give 8 baronets, 14 Members of Parliament, 6 Q.C.'s and serjeants of Jewish faith against 4 of the first, 5 M.P.'s, and 3 of the last in reality, these figures clearly apply only to Jewish *names* not personages. And with regard to the entry of 2 Jewish Quakers I have satisfied myself by inquiry from Dr. Beddoe that these have merely Biblical names and are not Jews by blood. In the following study of Kelly I have endeavoured to avoid this danger by omitting names which are at all doubtful, preferring to err on the side of omission.

With these preliminaries we may now proceed to the results obtained. In the lists of trades, solicitors, barristers, and brokers, there are some 186,441 names divided among 2,500 callings. Of these I have identified 3,110 names as probably those of Jews scattered among 344 callings. This gives a proportion of 1·67 per cent. Jews contained in Kelly's list, which is but slightly more than their proportion, 1·22, of the whole population of London. It is somewhat curious that in the first London Directory published in 1677, *A collection of the names of the merchants living in and about London* (republished by Messrs. Chatto and Windus, 1879) the Jewish names number 46 out of a total of 2,000, giving a higher percentage (2·3) than in the latest London Directory.

Turning to examine these occupations more closely, we may first classify them according as they are productive or unproductive of new materials for commerce; in an economic sense the "middleman" is of course as productive as the manufacturer. One hundred and five trades, including 672 individuals, may be classed as manufacturing of one kind and or another. The remainder we may divide into merchants dealing with goods on a large scale, brokers mediating between buyer and seller without holding stock, tradesmen selling goods over the counter, and to these may be added the various kinds of professions, including 2 midwives. Dividing 344 callings and 3,110 individuals among these various divisions we obtain the following table :

Nature of Calling.				No. of Trades.		No. of Individuals.	
I.—Productive.							
Manufacturing	...	...	...	105		672	
II.—Unproductive.							
Merchants	...	...	...	70		687	
Brokers	...	...	...	89		487	
Tradesmen	...	...	...	115		1,161	
Professional	...	...	...	15		154	
Total unproductive				239		2,488	

It would be desirable to compare these results with the general statistics of England or London, but unfortunately no material exists for the purpose. Judging merely from Kelly the proportion of "unproductive" trades (69 per cent.) does not appear to be very much higher than the general proportions in mercantile London though it is undoubtedly higher as regards the number of individuals (81 per cent.).

Classifying our results on a different system we may determine the various branches of trade into which the main lines of Jewish activity fall. Summing up under "clothing" all the industries occupied in providing covering of any sort for men, and under "furniture" all those which supply domestic interiors, we may analyse the various occupations in the following table :

Class.	No. of Trades.	Individuals	Class.	No. of Trades.	Individuals.
Merchants & Factors	84	689	Iron	18	70
Clothing	68	799	Instruments	11	88
Furniture	49	848	Tobacco	9	164
Food	38	848	Money (coined)	5	88
Stationery	19	111	Toys	4	51
Jewellery	17	245	Professions	15	154
Leather	17	81			

It would not be very difficult to account for the causes which confine Jewish commercial activity within these somewhat narrow limits. There comes first the tendency towards the "commerce of intangibles," as Bagehot (*Economic Studies*) terms dealing with money *per se* without the goods which it represents. This may be due to the long experience Jews have had owing to their cosmopolitan position, which enabled them to engage in international exchange before a Stock Exchange was ever thought of. Dealing as a fine art, apart from the nature of the things dealt in, has been likewise an accomplishment of the Jews due as much as anything to their roving habits. The clothing industries are always and everywhere the best represented, and it is only in their capacity for utilising the classic "old clothes" that Jews are at all singular; perhaps, with regard to this, the degraded position which Jews formerly held may have helped to throw into their hands a business both lucrative and despised. The same explanation may hold good as regards furniture, the only point needing explanation being the predominance of Jewish interests in "antique" furniture. The branch of the food industries particularly affected by Jews is that connected with fruit. The reason doubtless is that fruit can be sold on Sunday, and the difficulty of keeping two Sabbaths, Saturday and Sunday, is thus avoided by Jewish fruiterers, who seem, indeed, in many cases to remove all difficulty by keeping none.

Of the remaining branches of industry mentioned above, some kind of explanation may be given by pointing to the cosmopolitan connections of Jews which enable them to obtain goods from the Continent with slightly more ease than others. The instruments, jewellery, stationery, toy, and tobacco trades are affected by this consideration which is all important in the case of coin. Among the other two branches of trade, ironmongery is often a development of trade in "old metal," while the trade in leather has a curious history. On the Continent up to the present generation, skins used to be collected from the villagers by wandering Jews who would naturally have business relations with Jews in this country. Thus throughout the extent of Jewish trades one can trace the influence of social isolation, religious views, or cosmopolitan relations.

We have still to examine the details of the number affecting each particular trade, but the length of the list clearly calls for some method of selection. The average to a trade in the list is about 9, and if we select those having 10 and over we get those trades which attract Jews more than ordinarily even among the trades in which they make any appearance. There are 3 trades having over 100 (Stock Exchange brokers, general merchants and tailors), 7 between 50 and 100, 4 between 40 and 50, 7 between 30 and 40, 8 between 20 and 30, and no less than 5 between 10 and 20. These 88 occupations, containing over 10 Jewish names in Kelly's *Trades Directory* for 1883, are as follows in alphabetical order, the professions being in italics:—

Trade.	No.	Trade.	No.	Trade.	No.
Agents—Commission	16	Dressmaker	11	Picture frame manfr.	17
Do.—Manufacturers	10	Fishmonger	41	do. dealer	15
Do.—Shipping	18	Fancy goods importer	89	Piecebrokers	17
Architects	12	Fruit merchant	15	Printers	14
Auctioneers	17	Fruiterer	55	Provision merchants	16
Bagmakers	12	Furniture broker	60	Rag merchants	28
Baker	26	Fur merchants	18	Salemen—fish	11
Bookseller	10	Furriers, wholesale	80	do. fruit	82
Bootmakers, wholesale	44	do. retail	16	do. meat	10
do. retail	36	Greengrocers	17	Schools, private	11
Barristers	27	Grocers	22	Silversmiths	14
Brokers, City of London	78	Hairdresser	10	Skin merchants	12
do. Diamond	15	Hat manufacturer, whl.	11	Slipper manufacturer	12
do. Stock Exchange	188	do. retail	19	Solicitors	47
Builders	10	Hosiers	14	Sponge merchants	19
Butchers	84	Jewellers	40	Stick manufacturer	18
Cabinetmakers	14	Lamp manufacturers	11	Surgeons	12
Capmakers	10	Leather merchants	15	Tailors	128
Carvers and Gilders	12	Linen-drapers	12	Tobacoonists	89
Chandlers	27	Marine stores	18	do. sundries	15
Chins dealers	20	Meerschaum pipe manfa.	16	Trimming manufacturer	21
Cigar manufacturers	66	Merchants—Australian	10	Trunk maker	14
Clockmaker	12	do. general	181	Umbrella maker	11
Clothier	89	Metal merchants	18	do. stick do.	16
Confectioner	11	Miscellaneous dealers	11	Upholsterers	14
Curiosity dealer	16	Opticians	10	Wardrobe dealers	37
Dairymen	12	Ostrich feather manfa.	19	Watchmakers	57
Dentist	19	do. dealer	14	Wine merchants	18
Diamond merchants	68	Outfitters	29		
do. Cutter	15	Pawnbrokers	16		

Thus we have in all 82 trades and 6 professions having 10 or more Jews, and these include 2,282 individuals, leaving only 828 individuals to be divided among the remaining 256 trades in which Jews can be traced in Kelly. We should subtract from these results the names repeated under different but similar headings, clockmaker and watchmaker, clothier, outfitter, and tailor, &c.; the name of Whiteley, e.g., occurs more than a hundred times. Of these "doublets" there are no less than 85 in the above list, including 1,164 names of which at least the third or 388 are repeated and should properly be subtracted from our total, but may be left to compensate for the many necessary omissions.

Even the above list is not sufficient to determine what are the specifically Jewish trades in London. Thus, though there are 86 Jewish retail bootmakers in the list, there are 2,900 in all, and the proportion of Jews is by no means abnormal. We have clearly to examine the proportion of Jews to others in the various trades in order to determine which are those to which Jews are attracted more than others. As I went through the various lists I took note of cases where Jewish names seemed anything over 2 per cent., and the following list gives all those trades in which Jews were observed to have more than 3 per cent. or double their ordinary proportion. Many of these have only a few individuals altogether, and as their Jewish followers do not number 10 they are excluded from the preceding list; these are marked with an asterisk in the following table:

Trade.	Total	Per cent.	Trade.	Total	Per cent.
	No.	Jews		No.	Jews
*Birmingham Merchants...	28	17	*Cane importers	7	42
*Bristol Merchants.....	28	28	Cigar manufacturers	300	22
Brokers	1,881	4	**Cocoonut merchants.....	8	100
do. Stock	2,826	5	Curiosity dealers.....	47	95

Trade.	Total	Percent.	Trade.	Total	Percent.
	No.	Jews		No.	Jews
Diamond cutters.....	52	20	Ostrich feather manufrs....	46	48
do. merchants.....	188	84	do. dealers.....	28	57
Dentists.....	541	4	Piece merchants	25	68
*Esparto merchants	5	60	Rag merchants.....	141	20
Fancy trade	270	15	Slipper manufacturer.....	15	80
Fishmonger	706	6	*Sponge importers.....	8	62
Fruiterers	580	9	do. merchants	29	67
Furniture brokers.....	550	11	Stick maker	49	27
Furriers ...	78	89	Tailors	2,180	6
* Gilt Jewellers	8	25	Tobacconists	1,570	3
*Horsehair merchants	40	24	do. sundries	82	47
Jewellers	620	6	Umbrella stick maker.....	86	44
Meerschaum pipe manufrs.	86	44	*Valentine maker	81	80
Merchants, general.....	2,700	5	Wardrobe dealers	371	10
*Military stores	19	58	Watchmakers	1,039	6
*Money changers.....	7	42	Total.....	14,068	84
*Orange merchants.....	8	75			

The only trade entirely monopolised by Jews in London is thus seen to be that of the cocoa-nut merchants, all three of whom appear by their names to be Jews. For the rest, it will be observed that the highest percentages are reached in cases where the total numbers engaged are the smallest. The "Judaism of the Stock Exchange" turns out to be by no means an extraordinary percentage of that institution (only 5 per cent). The chief Jewish monopolies appear in cocoa-nuts, oranges and esparto grass, canes, slippers, sponges, and umbrellas, furs and ostrich feathers, meerschaum pipes and valentines—scarcely the commodities which rule the world of prices.

Before leaving the results obtained from Kelly's *Trade Directory*, we may refer to a piece of unconscious humour which served to lighten a toilsome labour that was even more heavy in the compilation than it can be in the perusal. At the very head of the list of "pork butchers," figures, doubtless by an embarrassing oversight, a name unmistakeably Jewish and attached to an address equally Judaic, referring as it does to Middlesex Street, once and still known as "Petticoat Lane." Though licensed by the Shechita Board, the butcher referred to probably owes his questionable position to the display of the harmless kosher "worsht" which must have misled Messrs. Kelly's agent.*

So much for the occupations of the Jews in London of the middle and upper classes. For the lowest classes we have more definite details from the Reports of the Board of Guardians; but on the other hand, these give us no means of comparison with the followers of other creeds. The applicants to that body are classified by occupations, the list of which includes no less than 104 trades. Taking the average of these for the four years 1879-82, we get the following order of attractiveness of various occupations.

Tailors.....	884	Cap makers.....	86	Stick makers...	14
Hawkers.....	228	Pressers (tailors)	29	Furriers	18
Cigar makers.....	149	Charwoman.....	26	Porters	18
Glaziers	127	Slipper makers...	28	Fishmongers ...	12
Boot finishers.....	98	Teachers	22	Carpenters.....	12
General dealers.....	86	Machinists.	22	No. classified	1,528
Boot and Shoe makers	44	Cabinet makers...	21		

* Trade in pork or other forbidden food is not permitted to Jews by Rabbinic Law (Cf. *Schulchan Aruch Jore Deah*, cxvii. § 1).

These do not by any means represent the whole number employed in these trades, nor even the whole number of those who have applied during the past four years, for which we should probably have to add fully one-third. But it doubtless represents very faithfully the trades most frequently adopted among the Jewish poor, and at the same time the trades in which the Jewish poor find it most difficult to earn a livelihood.

But by no means all the Jews of the lower classes are represented on the books of the Board of Guardians. In a previous investigation we have seen there are about 11,000 belonging to class G, who have either never applied or have ceased to apply to the Board for assistance. This class form the "missing link" in any inquiry into the condition of the Jews in London. Many of them, however, are connected with an institution which in its way has become as much a model to all similar institutions as the Board of Guardians of Jewish Poor has been recognised to excel all other Boards of the like nature. (Cf. Stallard, *London Poor*). The members of the Jewish Working Men's Club are drawn from the class intermediate between the clients of the Board of Guardians and the tradesmen whose names are recorded in the Directory. The occupations of the present members have not been ascertained, but in their relative importance have probably not changed much since the foundation of the Club. Attached to its First Report in 1855 were details of the 1,459 members (1,107 men, 352 women,) 300 of whom were not specified, and the remainder distributed among 82 trades as follows :—

Tailors	805	Furniture-brokers	...	15	Carvers	6
General Dealers	...	197	Diamond-workers	...	18	Gilders	...	...	...	6
Cigarmakers	...	184	Jewellers	...	12	Printers	...	...	...	5
Travellers	...	77	Teachers	...	12	Tinsmiths	...	...	...	5
Bootmakers	...	86	Feathermakers	...	11	Bakers	...	...	...	4
Machinists	...	82	Dressmakers	...	10	Confectioners	...	...	...	4
Butchers	...	81	Fishmongers	...	9	Bookbinders	...	...	...	3
Cabinetmakers	...	29	Furriers	...	9	Carpenters	...	...	...	3
Clerks	...	27	Waterproofers	...	9	Cooks	...	...	...	3
Cutlers	...	22	Hatters	...	8	Looking-glass makers	...	...	...	2
Clickers	...	16									

The chief item deserving attention as containing information not yet given by the preceding tables is that of 77 travellers, a mode of occupation in which Jews are said to be very successful.

Finally, though the Club has not tabulated the occupations of its members since its foundation, I am enabled to give the occupations of the members of the recently-formed Lads' Institute, which may serve to indicate the occupations of the coming generation in the lower social grade.

Tailors	40	Upholsterers	7	Teachers	8
Cigarmakers	...	22	Clothiers	...	6	Chairmakers	...	...	...	2
Bootmakers	...	18	Butchers	...	5	Compositors	...	...	...	2
Cabinetmakers	...	14	Engravers	...	5	Diamond cutters	...	...	...	2
Cutlers	...	14	Fishmongers	...	5	Furniture dealers	...	...	...	2
Dealers	...	14	Travellers	...	5	Gasfitters	...	...	...	2
Diamond Polishers	...	13	Watchmakers	...	5	Leather dressers	...	...	...	2
Rivettors	...	13	Capmakers	...	4	Rag dealers	...	...	...	2
Clerks	...	10	Furriers	...	4	Shoemakers	...	...	...	2
Clickers...	...	8	Carvers	...	8	Slippermakers	...	...	...	2
Fruiterers	...	8	Cigar bundlers	...	8	Stonemasons	...	...	...	2
Jewellers	...	8	Sponge dealers	...	8	Wood carvers	...	...	...	2
Cigarettemakers	...	7	Hatters	...	8						

Besides there was one each engaged in the following : agent, assistant bagmaker, bookbinder, bookkeeper, carpenter, cattle dealer, chairmaker, cigar sorter, chromo-lithographer, currier, decorator, dentist, diamond cutter,

draper, dyer, embosser, engineer, fancy trade, glass warehousemen, harness-maker, lacemaker, lampmaker, law stationer, machinist, Matzo baker, metal sorter, office boy, packing case maker, papier maché maker, piece-broker, picture frame maker, pipe carver, portmanteau maker, ring maker, salesman, shopman, silversmith, skinmaker, slipper maker, stick maker, surveyor, tea broker, tinplate worker, ticket writer, tobacconist, toy maker, tradesman, turner, watchmaker, waterproofer. In all including 12 at school and 10 unspecified we have no less than 91 different trades in which these 347 lads are being trained, an amount of versatility which bids fair for the future and points to the final disappearance of Jewish restriction in occupations. It is for this reason, I have thought it well to give the list (which has hitherto been unpublished) *in extenso*. Though tailoring still retains its supremacy, I am informed that this applies to the older lads and that in the past three or four years a general disinclination for that occupation has been shown by Jewish parents of the lower classes. As has become abundantly evident from the above investigation the Jewish tailor, both as master and as workman, is by far the commonest figure among the occupations of the Jews of London.

VI.—PROFESSIONS.

If the general occupations of a people give us an insight into their manners and customs as a whole, the number of professional men included among them is a tolerably fair indication of their intellectual calibre and special capacities. Up to very recently many of the professions, notably that of Law, were closed to Jews throughout Europe either absolutely or by the fact that the rewards of the pursuit were denied to them by prejudice. Notwithstanding these restrictions Jews are found very largely represented in the principal professions in all Continental countries outside Russia, and the fact has, curiously enough, been one of the chief accusations against the Jews by anti-Semites. I purpose collecting in the present "study" the somewhat fragmentary details I have been able to obtain as to the number of Jews in the various professions, reserving for future enumeration and investigation the names of those Jews who have obtained distinctions in them.

We may begin by referring to some results already obtained as to the proportions of Jews and others engaged in professions generally. We have seen that in Prussia, 1861, 3.55 per cent. of adult Jews were professional men against 2.15 among the rest of the population, while in Italy the proportions were 8.7 Jews against 8.7. But these figures apply to the whole countries in question, and the favourable percentages of the Jews might well be attributed to the fact that they mostly congregate in towns. Turning then to the statistics of towns, we learn from Schwabe and Jeitteles that, excluding the army, 8.7 per cent. of Berlin Jews followed the professions against 8.1 in the whole population, while for Vienna the proportions were 6.08 and 5.32 respectively. Twelve or thirteen years ago, therefore, the proportion of Jews who went in for the professions was practically the same in the capitals of Prussia and Austria as those of the general population. But, as Euclid has forgotten to remark, things which make up equal sums may be themselves unequal, and it will be desirable to examine the inequalities in the several professions which make up the equality among professions in general. And we may begin with the professions *par excellence*, Law and Medicine.

Law. Schwabe gives under the rubric "Justice" the proportions of Jews as only 1.6 per cent. against a general proportion of 4.1 engaged in this profession. I do not exactly know whether under this term he includes administrative officials generally, but this result seems opposed to all one hears as to the prevalence of Jews in the legal professions, especially in North Germany. For Prussia generally nine years later than Schwabe's results, i.e., in 1880, I have the following list, which gives an entirely different account. It comes from an anti-Semitic source (*Deutsche Wacht*, i. 217), and must, therefore, be received with some suspicion, though it agrees

with much that Herr Lasker has been recently saying in America. The titles scarcely allow of adequate translation into English :

	All.	Jews.	Per cent.
Oberlandsgerichts-Räthen ...	234	18	7.7
Landgerichts-Präsidenten.....	91	7	7.7
Do. Directoren	176	1	4.0
Richtern	8,368	815	9.8
Staatsanwalten	217	6	2.8
Gerichte- Assessoren	299	59	19.7
Do. Referendaren.....	8,226	790	24.5
	7,606	1,292	15.9

As Jews are only 1.3 per cent. of the Prussian population, this list gives a preponderating proportion of Jewish lawyers, and the last two items seem to promise still greater proportions in the future. At the Juristic faculty in Berlin in 1880 the proportions were still higher. Out of 7 ordinary and 4 extraordinary Professors of Law, Jews claimed two of each class. A similarly suspicious source (*Der Talmud*, 1880, p. 29) asserts that in Vienna out of 479 Advocates 178 were Jews, though Jeitteles gives only 88 Jewish Advocates in 1869, in which year the percentage of Jews in the legal profession was 0.59 against 0.33 in the general population. The higher proportion receives some confirmation from the statistics of the several faculties of the Austrian Universities given by Windt (*Statist. Monats.* 1879, pp. 577, &c.) and tabulated by Oettingen (*Moral Statistik*, Tafel 81). In 1870 the Jewish legal students formed 11 per cent. of 3,196 in all (= 352) and in 1878 they were 16 per cent. of 4,491 (= 720). In the other half of the Empire the tendencies of Jewish youth towards the legal professions seem even greater if we are to believe Hunfalvy (*Ethnographie von Ungarn*, p. 374), who asserts that out of the 432 Jews studying at the Hungarian Universities in 1872, no less than 252 belonged to the Juristic faculty. Schwicker (*Statistik v. Ungarn*, p. 657) also mentions that of the 1,744 students at the Rechtsacademie in 1873, 77, or double their proportion, were Jews.

In explanation of this tendency to a legal life it may be observed that the chief intellectual pursuit of Jews in the immediate past has been connected with the Talmud, a work eminently legal in contents and tone, which by the method of its study has been well adapted to develop a capacity for seeing and stating the pros and cons of any possible subject. The general acquaintance with practical life obtained from residence in cities must also be of use in legal study, and the "push and patience," so characteristic of Jews is found combined in them with another important element of legal success—self-confidence. Before leaving the subject it may be remarked that the Jews of England do not seem as yet to have the legal enthusiasm of their Continental brethren. I could only ascertain 27 barristers and 47 solicitors out of the rolls of 2,640 and 4,920 respectively, proportions rather under than over that of the Jews in London. On the Continent, however, law is a State profession, and offers a surer livelihood, if less brilliant prizes than here, while the study of the Talmud has been less widely spread in the past among English Jews than among any other body of Israelites.

Medicine. Of all callings that of medicine has been the one which Jews have been allowed to prosecute in the past with least interruption. Whatever their attitude towards the Jews in general, the ruling classes have always submitted with tolerable good-will to be cured by Jewish doctors. And it

is natural that the Jewish intellect should turn with predilection towards the science and art of health. Thus, at Berlin, we gather from Schwabe that in 1871 there were four times as many Jews in the medical profession as in the whole population (2·9 against 0·8 per cent.) While at the Berlin University exactly half the 22 medical professors were Jews (*Der Talmud*, p. 47); and Jeitteles gives the Jewish proportion of doctors at Vienna, 1865, as nearly double (1·31 against 0·78). Servi (*Gli Israeliti*, p. 300) calculates that there was 1 doctor among every 385 Jews in Italy against 1 in 1,150 among Italians in general. Even the fair sex seem to share the tendency among Jews, judging from some Russian statistics, which inform us that out of 430 female medical students in Russia, 1877, no less than 78 were Jewesses (*Jewish Chron.*, 27 April, 1877).

But it is in Austria that the predominance of Jews in medicine is most decisively marked. In 1880 there were said to be in Vienna 374 Jewish doctors out of a total number of 1,097 (*Der Talmud*, p. 29), which we can the more readily believe, as in 1869 Jeitteles enumerates 287. The ranks of doctors who specialize in one particular disease (if that is the meaning of "Spezialärzte") seem to be monopolised by Jews, who made up 88 out of 40 in Vienna, 1880 (*ibid.*). And if we refer to the number of medical students at the Austrian universities, the same high proportion strikes us. B. Windt, who has a special paper on this subject (*Statist. Monats.*, 1881, p. 453), points out that whereas in 1851 Jews were 16·1 per cent. of the medical students of the Austrian universities in 1880 they were no less than 28 per cent. In the other half of the Empire the proportions seem to be still more favourable to Jews. Out of the 3,207 doctors in Hungary, 1877, 1,031 were Jews, and in the capital 248 Jews were serving as doctors against 310 of other creeds (*Jewish Chron.*, 8 Feb., 1878). It is not at all astonishing, therefore, to find Servi recording (l.c. p. 311) that at the Medical Congress at Buda-Pesth, 1864, there were 68 Jews out of the whole number of 407. Indeed, as regards Austro-Hungary, one might modify the old proverb and say *Ubi tres medici, duo Judæi.*

Here again we may repeat what we have said under the preceding profession. English Jews do not appear to share the tastes of their Continental brethren as regards their choice of a profession. Only 23 Jewish names appear on the roll of the Royal College of Surgeons, while not one Jew has the right of placing F.R.C.P. (Lond.), after his name.

Clergy. We may follow law and medicine with the profession which shares with them the qualification of "learned." It is somewhat curious that Jews appear to need the services of less clergymen than any of the great religious bodies. Being "a kingdom of priests" (Ex. xix. 6) they can and do perform many of the sacred functions (and theoretically they could perform all) without the intervention of a class of men set apart for the purpose. The lower social standing of Jewish clergymen among their coreligionists, as compared with priests of an Established Church, may have something to do with their paucity of numbers. The following table indicates the relative frequency with which Rabbis are found among Jews in various countries as compared with priests among Roman Catholics and clergymen among Protestants. The details out of which I have formed it are: the number of Rabbis in Italy (= 49) as given in *Jew. Chron.* 14th October, 1881, 390 in Austria, 1869, as reported by Schimmer (*Statist. d. Judent.*), 129 in Germany, 1871, (excluding Prussia) by Engelbert, while the

actual proportions for Hungary occur in Schwicker (l.c. p. 605) and I have taken the 25 Jewish clergymen of London as exemplifying the supply for England generally. The proportions for the other denominations occur in Oettinger (*Moral Statistik*, p. 626) :

Country.	Year.	Number of laymen to each clergyman among		
		Jews.	Catholics.	Protestants.
Austria	1869.	2,150	1,143	1,784
Hungary	1869.	1,578	1,420	952
Germany	1871.	1,420	812	1,600
Italy	1880.	900	267	—
England	1883.	1,884	1,320	908

It must be observed that I have omitted to reckon among Rabbis the Cantors who are attached to every important congregation, and who often officiate as ministers as well as Cantors in minor congregations. Of these there were 258 in Austria and 228 in Germany at the above dates, and the proportions would be considerably altered if these had been added. But as choirmasters are certainly not enumerated in the other lists it would have been misleading to have included Cantors among Rabbis. The above figures refer only to men whose sole function is to give spiritual direction to their congregations.

Literature.—Unlike the preceding, the life of letters, though recognised as professional is not organised, and it is therefore impossible to give any very precise determination of the number of Jews who enter a literary life. The only detail of the kind that I have been able to obtain refers to Vienna for 1869, as given in the admirable book of Jeitteles, *Die Cultusgemeinde der Israeliten in Wien*, 1878. He mentions (p. 74) that 124 Jews led a literary life in that city, forming 0·45 per cent. of the adult workers, against 0·13 of the general population. This refers in reality to the number engaged in the press, since we learn (p. 164) that of these 124 no less than 119 were editors and journalists. For information as to those literary Jews who earn fame at their calling we may refer to the dictionaries of contemporary literary biography. I find that among the 4,525 names of literary celebrities contained in A. de Gubernatis' *Dizionario biografico degli scrittori contemporanei*, 1879, there are 62 Jewish names (1·4 per cent.), while in Bornmüller's *Schriftsteller-Lexikon*, 1882, there occur no less than 65 Jewish names out of the 2,780 contained in it, giving the large proportion of 2·6 per cent. The different proportions in which Jews occur in the two works in question may be attributed to the fact that the former naturally gives greater prominence to writers in the Romance languages in which few Jews write, while the latter gives equal predominance to the Teutonic authors among whom Jews are naturally better represented. Another reason for the difference may be found in the fact that Gubernatis includes scholars in his enumeration of writers, whereas Bornmüller restricts his entries more closely to *litterateurs* in the sense of imaginative writers: the former may be said to represent scholarship, the latter *belles-lettres*, including the highest class of writing for the press. As for Jewish writers in the strict sense of the term as applied to writers on Jewish subjects, I calculate that C. Lippe's *Bibliographisches Lexikon*, 1881, contains the names of some 968 contemporary Jews who have written on Jewish topics.

Press.—It is usually asserted that Jews are represented on the Press in very great proportions. We have seen that in Vienna, 1879, they had three times as many editors and journalists as their proper proportion, and this would be about a fifth of all the journalists in the Austrian capital,

whereas the Jews formed but one-fourteenth of the population. In the Statistical Annual for Berlin, 1883, just issued, Jews are 4·8 in the population, and have 178 out of the 2,059 engaged in press work in the Prussian capital, i.e., about twice their proper proportion (*Isr. Wochensft.* 12 Sept., 1883). The anti-Semites, while asserting that Jews had a preponderating influence on the German Press, point to far more newspapers whose perusal they recommend as "independent of Jewish influence." Thus I have before me an anti-Semitic broadsheet (see my anti-Semitic bibliography, *Trübner's Record*, 1883, No. 111), which recommends 20 papers of this kind as against 12 which "write in the Jewish interest." And among the latter the fact that these newspapers spoke in favour of, or did not speak against, the Jews, does not by any means prove that they were edited or written chiefly by Jews. And Prof. Bresslau, in his admirable answer to Treitschke (*Zur Judenfrage*, pp. 6, 7, and 19), enumerates 37 of the principal German journals which were either anti-Semitic or unconnected in any way with Jews. He expresses his opinion that Jews are chiefly to be found in the second and third rate German papers. As for papers written by Jews and for Jews, Dr. Singer, *Presse und Judenthum*, (1882), gives a list of 102 Jewish journals in thirteen different languages. As the United Kingdom with five times the population of the Jews of the world had only 381 religious papers and journals (*May Press Guide*, 1881, p. 8), Jews may be said to be very well provided with papers addressed to their special needs.

Art.—In Art the Jews of Vienna were slightly inferior to the general population in point of numbers, 0·64 per cent. against 0·78. The principal details of interest among the 174 Jews and Jewesses who went to make up that proportion may be summed up as follows:—

	Musicians.	Actors.	Singers.	Dancers.	Painters.
Jews	84	80	18	4	18
Jewesses	2	24	15	4	6

It is impossible to say in which of these branches of art Jews were under their proportion. Probably in the last item, painting. It is very often said that Jews are utterly wanting in the power of pictorial representation. Certainly they have no very great names in the modern history of painting. Yet they appear in the exhibitions in very large numbers. Thus in the Royal Academy of 1881, there were 23 Jewish exhibitors out of 1,086 (18 painters, 2 architects, 2 sculptors, and 1 etcher), and in the Paris Salon of 1883, no less than 78 Jews appeared in the list (48 painters, 14 designers, 9 sculptors, 6 engravers, and 1 architect), though 21 of these were foreigners (*Jew. Chronicle*, 6 July, 1883). And in the Paris Exhibition of 1867, three Jewish painters received gold medals out of the 40 honoured with that decoration (Servi, p. 315). These facts seem to indicate that a fair proportion of Jews adopt an artistic life, if they obtain no great celebrity in their career. I regret that I can find no substantial details as to the number of Jewish musicians. The fact that a Jew obtained one of the fifty scholarships at the new Royal College of Music, whereas one in five hundred would represent the proper proportion, seems to confirm the popular impression as to the Jewish love and aptitude for music, and this may be further confirmed by the fact that of the six musical knights in England no less than three are of Jewish blood. The same absence of statistical data prevents our judging of the histrionic powers generally attributed to Jews. We find Jewish actors at Rome in the first century, in England in 1428, in Mantua at the beginning of the seventeenth century. And at the present time many

of the best known actors of the German stage are Jews ; it was said, e.g., that one-half of the Meiningen Company which visited England in 1882, were of Jewish blood. In 1878 a company of actors, headed by Herr Fischer, traversed Hungary, all of them being Jews (*Jew. Chron.*, 23 Aug., 1878), and there are certainly many wandering troupes of actors who play in Jüdisch-Deutsch, some of whom visit England from time to time.*

Army. Very few Jews appear to adopt the army as a profession. This is especially the case in Germany where it is a sort of *lex non scripta* that no Jew shall be an officer. Thus we have seen that in Berlin only 0·7 per cent. Jews followed the profession of arms (and these were probably military surgeons) against ten times as many (7·4) in the general population of the Prussian capital. In Italy, however, the proportions are more favourable, according to Servi (p 302), there being 87 Jewish officers at the time of his writing, so that out of every five Jews serving in the army, one was an officer against one in twelve in the Italian army as a whole. This might however indicate less privates rather than more officers did we not know the contrary to be the case, 1·4 per cent. of all Italian Jews being in the army against 1·1 of all Italians. In France Jewish officers appear to have extraordinary success. Of the 18 Generals of Division, 2 (Lambert and Séé) are Jews, while 3 out of the 87 Generals of Brigade are Jews (*Jewish Chronicle*, 14 Sept., 1883). In England I know only of one Jewish officer of high grade (Major Goldsmid) in the regulars, though there are several in the auxiliary forces. I may add here that as regards the rank and file of the English army in India, there were 250 Jews (Beni Israel) out of 177,821 in 1877, which is probably the reason why Brattesevic (*Statist. Monatseft* 1881, p. 417) gives the Jewish percentage of the British army as 0·46. In the home forces the Board of Deputies could find only 4 Jews who would take advantage of the furlough for Passover (*Report* for 1883). With the army one may couple the navy, in which, as is natural, one rarely finds a Jew. There is, however, an Austrian Rear-Admiral, and the late Commodore Uriah P. Levy, of the United States fleet, was a Jew. (Rost. l. c., p. 54).

Politics. Though one can scarcely speak of politics as a profession in the sense of a means of livelihood, political life—as with the other callings mentioned above—requires intellectual capacity, and is directly intended to benefit the world. I have compiled the following table from details given in the *Jewish Chronicle* after the last election of the lower Houses of Parliament in the various countries.

	Right.	Left.	Extreme Left.	Total.	Proper Proportion.
Germany		6	1	7	5
France		8		8	1
England	1	4		5	1
Hungary	8	1	2	6	20
Italy	6	1		7	1
Total	10	15	8	28	28

I have to remark that Italy seems quite exceptional in regard to the number of members of the Right, and I am uncertain how far this term may imply Conservative tendencies as it does in Germany, France, and England. Hungary, again, differs from all the other countries in having a much smaller number of Jewish Deputies than would correspond to the proportions in the population generally.

* The managers of four of the chief Paris Theatres (*Ambigu*, *Grand Opera*, *Gymnase Porte St. Martin*) are Jews, as well as the lessees of Drury Lane.

Chess is nowadays pursued as a means of livelihood, and as such can hardly be classed otherwise than among the professions. At the recent International Tournament in London, 1883, among the 14 competitors in the Master Tournament, no less than six were Jews, including the chief representatives of France, Austria, and England. In the result two Jews (Steinitz and Zukertort) were first and second; another, Englisch, was bracketed fifth, and a fourth Jew, Rosenthal, obtained the compensation prize for the competitor who scored best against the seven prize-winners. Thus one half the prizes fell to Jews. For several years the Jewish Working Men's Club has won the Chess Prize competed for by all the similar clubs in London. I find also that there have been no less than 25 Jewish writers on chess, some of them of very early date (Steinschneider, *Schach bei den Juden*), and all of them probably players of great skill.

Professors. We may conclude these somewhat desultory scraps about professions with a few details as to the number of professors at Universities. Professor Breslau mentions that there are 70 Jewish professors in German universities, and as these include 1,800 in all, Jews appear to have about their proper proportion. Another source (*Der Talmud*) mentions 47 as the number of *ordinary* professors, which would imply a much larger number of extraordinary professors. The same source gives an interesting table of the professors at Berlin.

	Theology. Jews.	Theology. Christians.	Law. Jews.	Law. Christians.	Medicine. Jews.	Medicine. Christians.	Philosophy. Jews.	Philosophy. Christians.
Ordinary	0	7	2	7	8	10	1	87
Extraordinary	1	7	2	4	8	12	9	80
Privat doceent	0	2	1	8	22	26	6	26

Or in all, 6 ordinary, 20 extraordinary professorships, and 29 Readerships held by Jews, to 61, 58, and 57 respectively by Christians. In England I find that among the 259 professors at Oxford, Cambridge, Durham, University, and King's Colleges, London; Owen's College, Manchester; and the new colleges at Bristol, Birmingham and Sheffield, there are six Jewish professors, viz., Professor J. J. Sylvester, Savilian Professor of Mathematics in the University of Oxford; Rev. D. W. Marks, Professor of Hebrew at University College; Professor A. Schuster, Professor of Applied Mathematics; Professor T. Theodore, of Oriental Languages; and Professor Drechsler, of Pathology, at Victoria University; and Professor P. Barnett, who holds the Chair of English Literature at Firth College, Sheffield. English anti-Semites, if there were such persons, might point to the fact that Jews have ten times their proper proportion in having six Professors. In France there are 4 Jewish Membres de l'Institut, and in Italy Servi mentions 17 professors at the Italian universities in 1869 (*Gli Israëli*, p. 298). It would have been interesting to know how many of these Jewish Chairs were for branches of natural science in which Jews, I know not why, are said not to excel. In the prospectus of the International Scientific Series which appeared in 1872, out of 41 works projected and placed in the hands of the most eminent scientists, 4 were to be by Jews (Bernstein, Rosenthal, Cohn and Steinthal), and of these the 2 former have appeared in the 48 volumes hitherto issued.

The foregoing details may serve to determine how far the Jewish intellect is directed towards the life intellectual at the present day. No very definite result can be arrived at, owing to two facts. In the first place the items are in most instances derived either from Jewish journals, which natur-

ally only excerpt those details which serve to indicate the superiority of Jewish intellect, or from anti-Semitic pamphlets, which, curiously enough, do the same, probably for the purpose of creating envy. And, secondly, even if we find a larger proportion of Jews as a whole adopting the learned and other professions, this is only what might be expected, owing to the fact that the majority of Jews live in towns, and their seeming superiority might entirely disappear on comparison with the town populations. We may, perhaps, be able to ascertain the comparative value of Jewish intellect by examining the numbers and specialities of Jewish celebrities.

VII.—VITAL STATISTICS.

I.—MARRIAGES.

The student of statistics has to take the three chief epochs in man's life—birth, marriage, death—in a different order from the chronological sequence as it effects individuals, and from the conversational "births, deaths, and marriages," which is due to a sense of rhythm. For it is upon the number and nature of marriages entered upon by a people that the whole "movement" of population depends. In particular, the age upon which marriage is entered upon determines such weighty points as these: the average duration of a generation (Rumelin, *Eden I.*), the fertility of marriages and the fecundity of wives, the physical and mental health of children (Matthews Duncan), and, some authorities say, the predominant sex of the offspring. Jews as a rule differ from their neighbours in all these points, and also vary in the number and nature of their marriages which thus attract the earliest attention of the inquirer into Jewish biostatics.

Frequency. And first as to the relative number of marriages entered into by Jews as compared with their neighbours. Here there is an almost universal consensus of statistics showing that Jews marry less than others in proportion to their numbers as the following table will show, which gives the number of marriages per thousand of population.

Country.	Epoch.	Jews.	Christians.	Authority.
Austria	1864	46	83	Jeitelles "Cultusgemeinde," p. 50.
"	1870	53	98	Bergmann, "Beiträge," p. 69.
Baden	1857-63	58	74	do. p. 69.
Bavaria.....	1838-48	61	75	Average from Beremann, <i>ibid.</i>
France	1858-9	62	82	Legouy, "Immunité," p. 68.
Hungary	1864-73	64	106	Schwicker, "Ungarn," p. 99.
Prussia	1832-40	72	89	Hoffman in "Jour. Stat. Soc." 1846 p. 78.
"	1820-76	75	88	Fireka, "Zeit. Preuss. Stat." 1834 p. 148.
Russia	1852-59	82	95	Legouy, p. 52.
"	1857	87	100	" Mouvement de la Russie en 1867," p. 19.
Tuscany	1861	70	97	Legouy, p. 60.
Victoria	1871-80	58	68	" Victorian Year Book," 1881, p. 177.

It has to be remarked that the low numbers for Austria are usually explained as being due to the large numbers of Jewish marriages which are only celebrated by the religious ceremony without the formality of a civil registration being attended to. Apart from this, the frequency of Jewish marriages, as indeed for marriages generally, diminishes as we advance from East to West. This is also observable between different parts of Germany. Bergmann shows that during the years 1873-4 in East Prussia, Jewish marriages were to Christian as 80 to 90 per 1,000, in Westphalia as 67 to 84, and in the Rhine district as 60 to 79.

In all these cases the frequency of Jewish marriages was less than that of Christian. The only exceptions I have been able to observe were in Bucharest, in 1878, where, if my calculations are correct, Jewish marriages

were to Christian as 127 to 65 per 1,000 (*Statistica din Romania* 1878, *Prima iorasului Bucuresci in anul 1878*), in Algiers, 1878, where Jewish marriages were to others as 105 to 75 per 1,000, and in Upper Silesia where Bergmann asserts the same. It is so generally thought that Jewish marriages are more frequent than those of others that the opposite result deduced from the above table requires consideration. Some explanation might be given of the variation by the well-known fact that marriages are less frequent in towns than in the country. But Humelin has shown ("Stadt und Land" in *Reden I.*) that this is mainly due to a fluctuating population of young country people in towns who return to the country to marry. The greater proportion of Jewesses to Jews may have some effect in reducing the marriage rate (*v. inf. a.*). In Austria and Hungary, again, the memory of former restrictions on marriage might have produced a custom of restraint in marriage. Further, the greater poverty of Jews, combined with their greater prudence, might tend to lessen marriage; though usually the marriage rate varies inversely with the social condition. On this point it is worthy of observation that the marriage rate has been slowly advancing in Prussia and Russia (see the table) and in Hungary where it was 54 in 1864 and 78 in 1873 (Schwicker, *l.c.*) A more important factor, in my opinion, is the greater number of children living among Jews which naturally lessens the number of marriages when reckoned according to the *whole* population. Thus in Pesth, I find the number of Jews and Jewesses married of those whose ages are over 20 slightly superior to the rest of the population (Körösi *Pest in 1881*, p. 207), though the marriage rate there, as elsewhere, is below that of the general population. The same holds good for Prussia, where in the year 1861 the percentage of married Jews and Jewesses of those above 14, was 51 and 55 respectively against 46 and 48 among Christians. Altogether I am inclined to consider the less marriage-rate of Jews to be only apparent as I shall also endeavour to show to be case with their birth-rate.

Age of Marriage.—As previously observed, this is the most important consideration concerning marriage, affecting as it does, the physical, mental, and social traits of a people. Under this rubric it is chiefly important to know the proportion of either sex marrying below the age of 20, and between the ages of 20 and 30, and I have been able to obtain details on these points for the Jews of East Europe only, though these, of course, form the majority of European Jews. The following table exhibits the results, the figures for Russia being calculated from an official work, *Mouvement de la population de la Russie d'Europe en 1867*, published by the Statistical Bureau of St. Petersburg, after the usual delay of 10 years. The details for Moscow and St. Petersburg are from Körösi *Statistique internationale des grandes villes*, 1876, those for Posen and Pesth from Bergmann *Beiträge*, and those for Austria from Lagneau *Dénombrement* p. 28. The percentage relating to women are placed in brackets and in the case of Austria and Pesth the figures for men apply to all marrying up to 30 :

Place.	Epoch.	Under 20.		20-30.	
		Jews.	Christians.	Jews.	Christians.
Austria	1861-70.	— (23.5)	— (16.1)	68.6 (58.7)	58.6 (57.6)
Moscow	1868-72.	6.2 (49.8)	4.0 (29.9)	78.6 (68.5)	55.9 (55.6)
Pesth	1868-70.	— (8.4)	— (50.6)	67.6 (57.3)	51.0 (53.1)
Posen	1867-75.	0.7 (17.8)	1.7 (17.1)	65.7 (69.1)	69.4 (63.2)
Russia	1867.	47.6 (63.2)	36.9 (56.7)	57.9 (29.4)	42.9 (33.7)
St. Petersburg..	1868-72.	9.5 (56.9)	8.7 (37.8)	57.4 (30.6)	48.1 (51.4)

From this table it is clear that the proportion of Jewish marriages which take place when both parties are under 30 is greater in every case except

Posen, and that if in some cases the percentage of those marrying between 20 and 30 is less than that of Christians, it is simply because so many more had been married off before 20. The case of Posen forms an exception to this, and Bergmann shows that the same is true of all East Prussia (*Beiträge* 82-4). The relatively early marriage of Jews was also noticed by Hoffmann who mentions that 78.6 per cent. of Jewish marriages in Prussia 1822-40 were under 40, against 74.6 of the general population (*Journ. Stat. Soc.* ix. p. 80). And yet though early, Jewish marriages, at least in Austro-Hungary and Prussia, are probably not too early from a physiological point of view. Bergmann observes that the proportion of Jewesses who marry at the most favourable age of between 20 and 30 is greater than for the rest of the population. Körösi, whose various works are a mine of information on Jewish vital statistics, gives elaborate tables in his *Statist. Jahrbuch*, 1873 (p. 37), which show that the Jews have the least "abnormal" marriages (bride under 18 or over 40, bridegroom over 40) 12 per cent. against 35 per cent. Catholics and 33 Protestants. On the other hand, it is clear from the above table that the same does not apply to Russia which holds in bondage more than half the Jewish population of Europe.

It is an interesting problem to investigate the causes which led to the early marriage of Jews.* It might be suggested that owing to the well-known greater proportion of male births among Jews there would be a greater number of Jews to compete for the hands of their female coreligionists. But the following table shows the remarkable and hitherto unsuspected fact that the proportion of Jewesses to Jews is even greater than the general proportion of women to men. I have compiled it from the materials given in the *Statistique internationale* issued by the Stockholm Bureau in 1876, which gives (pp. 96-102, "population par cultes") the numbers of Jews and Jewesses in various countries about 1870. The proportion for the general population are given for the same period in Martin's *Statesman's Year Book* 1877 (p. xxxix.)

Women to 100 Men.					
	Jews.	General.	Jews.	General.	
Bavaria	108	106	Ireland	89	105
Denmark	119	108	Italy	101	99
France	99	101	Prussia	108	108
Holland	108	102	Russia	104	102
Hungary	108	108	Sweden	108	109

Here, except in countries of small Jewish population like Ireland and Sweden, we have the proportion of Jewesses to Jews either equal or greater than that of females to males in the general population. The only cause I can suggest for this is the westward migration of young Jews seeking their fortune. It is difficult to say whether this preponderance of females would or would not lead to earlier marriage, though it could doubtless have a slight influence on lowering the frequency of marriage among Jews since more Jewesses proportionally must *ipso facto* remain unmarried.

But the earlier marriages of Jews, especially in Eastern Europe, are due to social and religious causes. The age of marriage, economists tell us, is determined by the "standard of comfort" reached by the general

* A point of some importance in this connection is the early age at which the signs of puberty occur among Jewesses. The fact is noticed by Müller, *Physiology*, Raciborski *Traité de la Menstruation* 1868, p. 680, who gives the average age of its appearance at 14.28 years for Jewesses against 15.26 for Russians, while Weber in a paper on the subject in the *St. Petersburg Medic. Wochens.* 1888, informs us that Jewesses had the maximum before 12 years old (12.5 per cent.) and the minimum after 18 (1.2).

population, and I have already pointed out the extremely low social condition of Jews in Eastern Europe. Still more important is the religious factor, the influence of the Rabbis in promoting early marriages being quite as strong as that of Catholic priests. This action of the religious authorities is based, as is well known, on the prescriptions of the Talmud, and it is highly probable that social conditions in Babylon 1,500 years ago have had their effect in determining the early age of at least Russo-Jewish marriage. For there is a clear distinction between the utterances of Palestinian authorities and of the Babylonian doctors on this point, the former sometimes fixing the limit desirable for a man's marriage at 24 (Kidd. 30a), the latter as early as 14 (*ibid.* 29a.) And the practice seems to have varied even more than the precept, for whereas R. Levi, a Palestinian Amora, incidentally states: "A man usually marries at 30 or 40" (*Shir. Rabba* vii., 14), R. Huna (fl. 250 A.D.), who lectured at the Academy at Sura, gave utterance to the celebrated dictum, "He who is 20 years old and has not taken unto himself a wife destroys all his days with sinful thoughts" (Kidd. 29b), thereby laying down the principle which has ruled Jewish marriage ever since. Yet it is extremely probable that this wide divergence between Palestine and Babylon was due to the easier conditions of life in the latter country, where the date-palm afforded all the requirements of life in somewhat the same way as the cocoa-nut palm in Polynesia (cf. Hehn. *Culturpflanzen*, p. 217). It is curious, if the above reasoning be adopted, that the prevalent Jewish custom of early marriage is due in the last resort to the fertility of the palms of Babylon.*

Whatever be the causes of the early marriages of Jews, there can be little doubt as to their effects. Not to speak of their influence on the "movement" of the Jewish population, which will concern us later, it is obvious that the early unions of the Jews of Eastern Europe have much to do with their poverty. While the standard of comfort conditions marriage, marriage helps to determine the standard of comfort. It is easy to see how early marriage handicaps Jews in the struggle for existence by causing them to give, in Bacon's phrase, "hostages to fortune." It is possible too that marriage before maturity may have a deleterious effect on the physical development and account in some measure for the small height and girth of Jews. Another evil attached to this custom is the absence of pre-nuptial love between the contracting parties. Marriage becomes almost a matter of business and gives rise to a specialised middle-man, the *Shadchan* or "marriage broker," who occasionally makes his appearance in the English law courts when either side is dissatisfied with the bargain. The custom again tends to cut short the experiences of the bride and prevents her becoming a helpmate meet for her husband, narrows her views of life and contracts the horizon of her interests to her own household. On the other hand such marriages tend to promote social purity, make the Biblical enactment (Lev. xix. 29) operative to the present day, give young people steadiness at the time of life most liable to temptation and cause the young spouse to be a better housewife, if a less expert woman of the world.

* It is right that I should add that an erudite friend suggests the influence of Zoroastrianism on Babylonian marriage customs, as given by Schorr in *Hackatus*. But this would only remove the chain of causes another link back, since Zoroaster might equally well be influenced by the social possibility of early marriage due to the fruitful palms of Mesopotamia.

Before leaving the question of age I may remark that in Buda-Pesth 73 per cent. of Jewish husbands are older than their wives against 64 of the general population. Not only are there more husbands older, but the difference of age is greater, an average of 8·7 years in the case of Jews, 6·7 years in the case of others (*Korosi Pest* in 1881, pp. 216-20). Further the earlier age of Jewish marriages, when compared with their less frequency, confirms us in our suspicions that the smaller marriage-rate of Jews is only apparent and would not hold for adults over 20.

Civil Condition.—Another point worthy of notice is the number of marriages which take place between bachelors and spinsters, technically termed "protogamous marriages" as compared with those between widowers and spinsters, &c. The following table summarises the results I have been able to obtain on this point, the numbers giving the percentage of bachelors and spinsters in Jewish and Christian marriages, the spinsters being placed in brackets :

Place.	Epoch.	Jews.	Christians.	Authority.
Austria.....	1861-70.	57 (98)	52 (9)	Schlimmer "Stat. d. Jud." 1 78, p. 6.
Moscow.....	1866-72.	68 (88)	53 (88)	Kordai "Grandes villes," p. 178.
Pesth.....	1868-75.	88 (94)	86 (89)	"
Prag.....	1879-80.	86 (96)	82 (92)	"Statist. Handbuch," 1881, p. 24.
Prussia, N.	1867-73.	91 (97)	83 (89)	From Bergmann, p. 96.
Russia	1870.	74 (80)	82 (87)	"Journ. Stat. Soc." 1880, p. 262.
S. Petersburg ..	1866-72.	88 (78)	86 (87)	Kordai "Grandes villes," p. 172.

With the important exception of Russia, therefore, a greater proportion of Jewish marriages are between bachelors and spinsters than is the case with the rest of the population. To some extent this is merely putting in another form the result at which we have already arrived, that there is a greater proportion of early marriages among Jews. But another reason for the less proportion of marriages between widowers and spinsters, bachelors and widows, &c., among Jews and Jewesses is undoubtedly their greater vitality which causes the proportion of Jewish widowers and widows to be less. Thus in Pesth, 1870, no less than 66 per cent. of persons over 50 had husband or wife alive among Jews against 51 per cent. among Catholics and 58 among Protestants (*Statist. Jahrb.* 1873, p. 38) and in 1857 the percentage was as high as 69. I think it also probable that Jewish widows re-marry less often, being more competent to earn their own livelihood by carrying on the business left by their husbands. The exception formed by Russia may possibly receive some explanation from the facilities for divorce among Jews in that country.

Consanguineous Marriages— I have previously given reasons for believing that English Jews marry their first cousins to the extent of 7·5 per cent. of all marriages as against a percentage of about 2 per cent. for England generally, as calculated by Prof. G. H. Darwin (*Fort. Rev.* July, 1875). The only other detail on this point that I have been able to find is given by W. Stieda *Die Eheschließungen in Elsass-Lothringen* 1872-6 (Dorpat 1878) who gives the proportion of consanguineous marriages among Jews as 23·02 per thousand against 1·86 for Protestants, and 9·97 for Catholics.

Mixed Marriages deserve notice on account of their social importance as well as of certain biostatistical phenomena which their progeny present. The following table summarises the results given in the sources accessible to me, the numbers representing the percentage of such marriages as compared with those between Jews and Jewesses. The results do not include cases where either side has become converted to Judaism before marriage.

Place.	Epoch.	Jews—Christians.	Christians—Jewesses.	Authority.
Algeria	1878.	0·94	0·94	" Ann. Stat. France " 1881, p. 581.
Bavaria.....	1875-80.	1·57	2·19	" Zeit. Bay. Stat." 1881, p. 213.
Berlin.....	1881.	7·95	4·91	" Statist. Jahrb." ix., p. 8.
Pesth	1881.	0·96	0·10	" Pest in 1881," p. 12.
Prag	1878-80.	1·14	0·20	" Statist. Handbuch," 1881, p. 24.
Prussia	1875-79.	4·46	5·86	Fireki " Z. Preuss. Stat." 1880, p. 16.
Vienna	1864-74.	2·80	3·06	Koröi " Grandes villes," p. 18.

The numbers for Berlin and Pesth apply to the number of married persons, and not, as in the other cases, to the number of marriages in the year mentioned. In Pesth one has to take into consideration the conditions of the Hungarian legislation which does not permit such marriages. To evade a similar law which obtained in Austria till recent years, Jews desirous of marrying outside the pale of their religion used to write themselves down " Freethinkers." Of 100 such marriages in Vienna, 1877, no less than 25 were between Jews and Christians, and 15 between Christians and Jewesses. (*Ann. de Demog.* iii. p. 128). It is curious that in Berlin where there are the greatest number of these marriages (64 to 389 purely Jewish marriages in 1881, *Veroffentl. d. Statist. Amts.* p. 48) there should also be manifested the greatest intensity of anti-Semitic prejudice.

Lastly as to *Divorce* the only details accessible relate to Bavaria where in the years 1862-75 Jewish divorces were only 5·1 per cent. of Jewish marriages against 6·1 Protestants, and 5·7 Catholics (*Bertillon in Annales de Demographie*, 1882, p. 290).

II.—BIRTHS.

Frequency.—As with marriages so with births Jews seem to show at first sight a lower proportion than the general population of the lands in which they dwell. The following table, giving the birth-rate per thousand, shows this result in every case except Algeria, Hungary and Prague.

Place.	Epoch.	Jews.	Christians.	Authority.
Algeria.....	1844	48·8	36·8	Legoyt, p. 72.
Algeria.....	1876	52·7	32·8	" Ann. Stat." 1881, p. 580.
Austria	1861-7	26·5	38·6	Legoyt, p. 55.
Austria	1861-70	28·0	31·7	Schimmer, p. 5.
Bucharest	1876	29·8	20·7	"Orasulul Bucaresti," 1878.
France	1865-9	24·9	26·5	Legoyt, p. 58.
Hungary	1874	46·9	39·7	Jagnan, p. 21.
Pesth	1878	37·9	42·8	" Stat. Jahrb," p. 55.
Prague	1880	26·1	31·9	" Stat. Handb," p. 25.
Prussia	1824-73	34·7	40·4	" Zeit. Preuss. stat.," 1879, p. 28.
Russia	1867	32·6	50·1	" Mouvem.,"
Russia	1868-70	32·0	49·5	Bergman, p.
Tuscany	1861	27·2	39·0	Legoyt, p. 60.
Westphalia	1824-73	30·1	36·7	Bergmann, p.

The result is surprising when we consider that the increase of the Jewish population is almost everywhere greater than that of the general population and M. Loeb calls this the most striking fact in Jewish biostatics (*Jews*, p. 42). Yet it is capable of an easy explanation, I believe, from the same cause which renders the marriage-rate of Jews, though really greater when compared to the number of adults, appear less when calculated in relation to the whole population. The smaller number of deaths under 5 among Jews causes the non-nubile portion of the population to be greater among them than among Christians, and makes any percentage less when reckoned on the whole population than it would be if reckoned upon the number of adults by

a much greater degree than is generally the case. Thus to take the case of Buda-Pesth, I find from Korösi's exhaustive work *Die Haupstadt Buda Pest im Jahre 1881*, that the percentage of the Jewish population under 20 was 45, while that of the Christian population was about 34 (p. 90) and it was approximately the same in 1871. Now supposing the same proportion to hold for 1873, the birth-rate instead of being 38 per thousand for Jews and 43 for Christians reckoned on the whole population (see the Table), would be 69 for Jews and 65 for Christians reckoned on the *adult* population only. Similarly in Vienna, 1869, the Jewish population under 20 was 46 per cent. while the percentage of the general population under the same age was 35 (Jeitteles, p. 68). I think it probable, therefore, that the smaller marriage and birth-rate of Jews is only apparent and would turn into a higher rate if applied only to adults. Thus we reach the curious result that the greater birth-rate of Jews makes them appear to have a less rate when the "infants" under 21 are taken into the calculation.

Fecundity.—Births to a Marriage.—This result is confirmed when we find that the average number of children to a Jewish marriage is almost invariably greater than those who fall to the lot of Christians. This number is ascertained by statisticians by dividing the number of the births in a year by that of the marriages. Applying this method to the various sources I have either calculated or extracted the items of the following table. By the process of division the difficulty as to adults is eliminated and the results become absolute :

Place.	Epoch.	Jews.	Christians.	Authority.
Algeria.....	1878	5·0	4·4	" Ann. Stat. de France," 1881.
Austria	1861-7	5·8	4·4	Legoyt " Immunité," p. 54.
Austria	1861-70	5·8	3·8	Bergman " Beiträge," p. 75.
Baden	1867-83	5·0	4·1	Ibid.
Berlin	1881	2·9	2·9	" Veröffentl. Stat. Amts," p. 48.
Bucharest	1870-4	2·6	2·4	Korösi " Grandes villes," pp. 189-911;
France	1855-9	3·9	3·0	Legoyt, p. 68.
Prague	1866-74	2·6	4·1	Korösi l.c. pp. 24-5.
Prussia, E.	1819-73	4·8	4·2	Bergmann, ibid.
Russia	1862-9	4·3	4·9	Legoyt, p. 52.
Russia	1867	2·8	5·0	" Mouvement en 1867."
Tuscany	1861	2·9	4·0	Legoyt, p. 60.
Vienna	1864-74	5·2	3·9	Korösi, l.c. pp. 18-22.
Westphalia	1869-78	4·4	4·1	Bergmann, ibid.

The extraordinary birth-rate for Austria (Schimmer, p. 5, even gives 10·1) indicates some error in the entries, and is in all probability due to the fact that a very large proportion of marriages are not entered on the civil registers. From the table it will be seen that, with the exception of Prague, Russia and Tuscany, Jewish marriages are more fertile than others. Nor is it difficult to explain why this should be so. Prof. Tait has deduced from a large body of statistics collected by Dr. Matthews Duncan, the law that the number of children is proportioned to the square of the number of years the wife's age is under 50 (Duncan *Fecundity, &c.*, 1866, p. 218), or in less technical language the younger the age at marriage the greater the number of children. Now we have seen that Jewesses marry earlier than others and they would therefore have larger families.* A striking confirmation of

* It is probable that Jewish marriages were not so fertile in Talmudic times owing to the long period during which lactation was allowed to continue. Thus in the riddle asked in *Ecka Rabbia* 1, "nine go out, eight come, &c." the twenty-four who serve are the months of suckling. Cf. too II. Mac. xli. 28, "Son I have borne thee under my heart nine months and given thee suck three years." The subject is discussed by Kotelman *Die Geburtskraft der alten Hebräer*, 1876, p. 49.

this explanation is given by the case of Russia which forms an exception as regards both the earlier age of Jewish marriages and their greater fertility when compared with the general population. Another cause slightly affecting the higher fertility is probably the lower rate of still-births among Jewesses, since the above quotations refer to "viable" children and the less the number of still-births the greater, *eo ipso*, that of viable children. A further reason may possibly exist in the greater proportion of first-cousin marriages among Jews. I suspect that these are more fertile. In 45 cases of such marriages where I have been able to ascertain the number of children *living* I have found this reach the high average of 4.7 per family. In striking contrast to this is the remarkable infertility of mixed marriages. Von Fircks has given the results of investigations into 1,678 such marriages in Prussia between 1875 and 1881, and finds that while the average number of children to a Protestant marriage is 4.3, to a Catholic 5.2, to a Jewish marriage 4.4, marriages between Jews and Christians only produce on an average 1.7 (*Zeit. Preuss. Stat.* 1883, p. 239). Similarly in Bavaria, 1876-80, while Jewish marriages have a fertility of 4.7, mixed marriages have only 1.1 (*Zeit. Bay. Stat.* 1881, pp. 188, 213). Schwabe mentions that there were 182 families with only one parent Jewish in Berlin, 1871, and these had but 255 children* living, an average of 1.4 (*Hauptstadt, Berlin*, 1871, p. 83), whereas in Vienna, 1869, the average number of children in a Jewish family was over 3.7 (*Jeittees*, p. 58). It would be desirable to know at what age the latter class of marriage is usually entered upon as this might to some extent account for their infertility if the age of the brides was at all advanced. But it seems more probable that racial influences are at work and that such marriages would be abnormally infertile.

Plural Births.—So far as the scanty materials go, there appear to be less twins among Jews than in the general population. Thus while in Russia 1867, there were 2.5 per cent. of twins to all births, Jewish twins were only 1.1 per cent. (*Mouvement de la population en Russie*, p. 11), and only 25 out of 100,000 would "earn the Czar's boun'y" for triplets against 35 of the general population. In Galicia between 1870-5 Jewish twins were 0.9 per cent., Christian 1.2 per cent. of all births (*Statist. Monat.* 1877, p. 178) while in Wieselburg (Hungary), 1833-55, there was one case of Jewish twins in 174 births, while among the Hungarians the proportions were 1 in 102 and among the Croats as many as 1 in 75 (*Glatter Lebenschancen*, p. 1.).

Sex.—Jews are favoured with a remarkable predominance of boys in the results of their marriages. This fact was noticed by Burdach at the commencement of this century, by Hofacker in his *Eigenschaften* of 1838, and Darwin drew attention to it in his *Descent of Man* (2nd edit., p. 248). The facts adduced by the last great authority are somewhat antiquated, being derived mainly from the two former through the medium of Thury *Loi de Production des Sexes*, 1863. They may be widely supplemented as the following Table will show, which gives the proportion of boys born alive

* Of 164 families where a Jew was the father, 49 children were being brought up as Jews, 106 as Christians; of 78 where the mother was a Jewess, 40 were being brought up as Jews, 60 as Christians; 82 per cent. in the former case, 40 in the latter, being educated as Jews.

to 100 girls in the various places.

Place.	Epoch.	Jews.	Christians.	Authority.
Algeria	1878	108	104	" Ann. Stat. de France, 1881, p.
Austria	1861-70	128	106	Schimmer, p. 6.
Buda-Pesth	1868-75	114	107	Kordai "Grandes villes," p. 5.
Buda-Pesth	1878-83	108	104	" Statist. Monats.," 1884, p. 136.
France	1864-59	111	105	Bergmann, p. 118.
Hungary	1876-78	114	105	" Statist. Monats.," viii, p. 478.
Posen	1819-78	108	105	Bergmann, p. 110.
Prague	1868-74	111	105	Kordai l.c. p. 25.
Prague	1879-80	106	103	" Stat. Handbuchl," 1881, p. 25.
Prussia	1850-54	111	106	Lagneau p. 25.
Prussia	1859-61	105	106	Ibid.
Prussia	1878-81	108	106	" Zeit. Reiss. Stat.," 1883, p. 232.
Russia	1862-59	118	105	Lagneau, p. 25.
Russia	1867-70	139	105	" Jour. Stat. Soc.," 1880, p. 258.
St. Petersburg..	1866-72	147	106	Kordai l.c., p. 174.
Vienna	1865-74	117	106	Ibid., pp. 21-2.

The causes of the predominance of one sex or the other in offspring are practically unknown, though all manner of suggestions have been made. The best known is that of Sadler and Hofacker, which lays down the rule that boys are peculiarly the results of early marriages. This is to some extent confirmed by Jewish statistics, but the superiority of Jews in this respect is equally marked in Russia, where early marriages are likewise the custom with the general population. It is established that children born in towns are more often boys than those in the country, and Jews live mostly in towns. Platter, who discusses the question in a paper on the "Hofacker-Sadler'sche Hypothese," in the *Statistische Monatschrift*, 1875, deduces from the examination of no less than 30 million births, the conclusion that the less the *difference* of the ages of the parents the more the probability of boys: this is to say the least, not confirmed by the results we have given for Buda-Pesth, where Jewish births are predominantly male, though the difference of age of parents is greater than among other creeds. Another suggestion particularly applying to Jews has been made by Lagneau, that the greater number of boys is due to the observance of the laws of *Nidda* (Lev. xv. 19). E. Nagel, who has a special paper on the subject (*Die hohe Knabenüberschuss der Neugeborenen der Jüdinnen* in *Stat. Monats.*, 1884, pp. 183-6), attributes the peculiarity (1), to the greater care which Jewish wives take of their health; (2), to the less number of illegitimate births. Both these facts have influence on the sex of viable children by lessening the number of still-born children, parturition being more difficult in the case of males. Thus the less the number of male children still-born, the more of them are viable.

Before, however, testing this explanation by an examination of the most favourable phenomenon of Jewish births—the low rates of illegitimate and still-born children—it is worth while inquiring how far the above figures for the sex of Jewish births are trustworthy. The completely abnormal figures for Austria, Russia and St. Petersburg when compared with those for Posen and Prussia render it likely that some uniform error occurs in the registration of Jewish female children in East Europe. And Lagneau suggests that less care is taken with the registration of females among poor Jews. We must therefore allow a large discount for this source of vitiation for our results before asserting that Jewesses bear more boys. The fact already cited of the greater number of Jewesses confirms this attitude of scepticism. Altogether it is probable that the superiority is but slight, though its uniformity renders its existence undoubted.

Illegitimacy.—Jews can boast of a considerably lower rate of illegitimate births than almost any other sect or nation. The strong ties of family, the greater supervision of public opinion, the less frequency with which Jewesses go out to service, are doubtless among the causes of this gratifying fact. Oettinger, who writes with an anti-Semitic bias, says that Jews are no more favoured in this respect than all other Nonconformists, and he quotes figures for Prussia, 1862-4, showing that Jews had 3·6 per cent. of their births illegitimate, while Dissenters had the slightly more favourable figure 3·2. (*Moral Statistik*, p. 325). But this explanation will not meet such an array of facts as is formed by the following table, giving the percentage of illegitimate to all births, at the place and time named.

Place.	Epoch.	Jews.	Christians.	Authority.
Austria	1861-70	12·7	14·7	Schimmler, p. 6.
Baden	1857-73	1·6	14·2	Bergmann.
Bavaria	1876	1·0	18·0	Ibid, p. 181.
France	1857-9	8·5	7·5	Lagneau, p. 28.
Hungary	1866-73	1·8	6·5	Schwicker, p. 187.
Moscow	1-68-72	0·0	29·9	Korosi "Grand villes," p. 181.
Pesth	1868-75	6·7	29·9	Ibid, p. 5.
Pesth	1878-83	10·7	23·9	"Statist. Monat." 1884, p. 285.
Posen	1819-78	2·7	5·9	Bergmann, p. 181.
Prague	1868-74	6·8	48·9	Korosi, l.c., p. 55.
Prussia	1832-40	1·8	7·0	"Jour. Stat. Soc." ix, p. 81.
Prussia	1875-80	2·7	7·6	"Zeit. Prouse. Stat." 1881, p. 329.
Riga	1864-70	0·1	1·1	"Russ. Revue," V., p. 427.
Russia	1867	0·2	8·3	Lagneau, p. 28.
Russia	1868-70	0·2	2·9	"Jour. Stat. Soc." 1880, p. 357.
St. Petersburg ..	1868-72	0·1	30·0	Kordi, l.c., p. 174.
Turin	1865	0·0	13·2	Korosi, l.c., p. 102.
Verona	1855-64	1·0	20·0	Lagneau, ibid.
Vienna	1868-74	8·7	44·9	Korosi, l.c. pp. 21-2.

The very high figure for Austria is almost without doubt due to the practice of omitting civil registration of marriage among the lower orders of Jews, thus causing the offspring to be reckoned as illegitimate. It is right to add that Schimmer, whose attention had been drawn to this fact, still contends that his numbers are correct, and gives further details (*Stat. Monats.*, 1876, pp. 161-3.) But these only prove too much. At Storozynee e.g. the percentage of Jewish illegitimate children is put at the absurd number of 99·61, which simply means that Jews there never register their marriages. It is worthy of attention that the favourable proportions are gradually becoming less advantageous to Jews where their isolation is being modified. In almost every case where the figures for a number of are given, a perceptible rise in the rate of illegitimacy may be discovered. Bergmann shows this to be the case with most eastern districts of Prussia, and where a diminution of the illegitimacy rate has occurred, as in Westphalia, it has been less than in the general population (*Beiträge*, pp. 129-30.) In reckoning the advantages of "civilization" for Jews one has seemingly to expect a rise in this unpleasant index. A further point to be noticed is that the rate varies with that of the general population; that for Pesth and Vienna are only relatively favourable.

On the other hand, the few facts available scarcely carry out Nagel's suggestion that the low rate of illegitimacy (where male births are rarer), causes the male sex to predominate more decisively among Jewish births in general. For the same predominance is for the most part seen in illegitimate births. This may be gathered from the following table giving

number of viable boys to 100 girls in illegitimate births, the authorities being the same as before :—

	Pesth.	Prague.	Prussia.	Vienna.
Jews	106	114	101	110
Christians	104	104	103	104

The point may not seem one worthy of being elaborately discussed, but it is one of the few biostatistical phenomena which seem to be distinctively racial.

Still-Births.—It is usually asserted that Jews are favoured with a lower rate of still-births, and we should expect this considering their lower infant mortality in general. The evidence I can adduce is about evenly balanced, though the long experience and general trustworthiness of the Prussian statistics serve to confirm strongly the general impression. The following table gives the percentage of still-born to viable children :—

Place.	Epoch.	Jews.	Christians.	Authority.
Baden	1867-70	4·0	3·1	Bergmann, p. 178
Berlin	1880	3·1	3·9	"Statist. Jahrb.", 1891, p. 28.
France	1855-9	5·2	4·8	Lagneau, p. 26.
Hungary	1876-8	1·3	1·6	"Stat. Monata," 1884, p. 184.
Pesth	1876-8	6·5	7·8	Ibid.
Posen	1819-49	3·9	3·4	Bergmann, p. 191.
Posen	1849-73	1·1	3·8	Ibid.
Prague	1865-74	5·0	4·4	Kordesi, "Grandes villes," p. 26.
Prussia	1830-76	2·1	2·7	"Zeit. Preussa. Stat.", 1877, p. 40.
Prussia	1875-81	3·4	4·1	Ibid, 1883, p. 232.
St. Petersburg	1866-73	5·4	3·4	Korden, Lc., p. 175.
Vienna	1865-74	5·1	4·5	Ibid, p. 23.

Among the reasons alleged to account for the difference may be mentioned the Christian custom of baptism immediately after birth, which is said to affect children prejudicially, the more favourable age at which Jewesses marry, and generally the greater care taken of themselves by the latter. It is scarcely worth while discussing these points as the facts of superiority is not so thoroughly made out as one could wish. As regards Nagel's contention that the less number of still-births is a cause of a greater number of Jewish boys born, I may observe that in Buda-Pesth, 1876-8, the proportion of boys in still-births was 122 among Jews, 116 among Christians, while the figures for St. Petersburg would seem to indicate as many as 185 for the former against 126 for the latter.

APPENDIX.

ON THE RACIAL CHARACTERISTICS OF MODERN JEWS.

*A Paper read before the Anthropological Institute,
February 24th, 1885.*

By JOSEPH JACOBS, ESQ., B.A.

IN the following research I have endeavoured to bring together all the data, scientific or historical, which bear upon the question of the purity of the Jewish race. I have found it necessary for this purpose to scrutinise somewhat closely many Jewish qualities and habits that have hitherto been regarded as peculiarly the results of race. Most of these, however, have been found to be due to social causes, and cannot therefore be regarded as primarily racial. Nevertheless I trust even the discussion of the secondarily racial qualities of Jews with which this paper opens may not be without interest to students of anthropology. They exhibit, I conceive, a striking example of the influence which the social life of man has upon his physical qualities. For a decision on the main question, I have been forced to turn

to history, which is on this occasion more than usually Janus-faced.

We have first of all to determine which are the Jews whose racial qualities we are to determine. I have made the following estimate, necessarily rough, of the various classes of persons now living, who may claim to be Jews by religion or by birth, or by both.¹

Name.	Country.	Number.	Per cent. of whole.
A. Jews both by religion and by birth .. ..	..	6,925,000	98·9
Ashkenazim	Teutonia and Slavonia	6,500,000	92·8
Sephardim	Romance, Levant, Africa	425,000	6·1
Samaritans ?	Nablus	150	..
B. Jews by religion, but not by birth .. ..	..	75,000	1·1
Falashas ²	Abyssinia	50,000	..
Karaites	Crimea	6,000	..
Daggatouns, &c. ³	Sahara	10,000	..
Beni-Israel ⁴	Bombey	6,500	..
Cochin ⁵	Cochin	1,600	..
C. Jews by birth, but not by religion .. ..	..	12,000	0·2
Chuetas or Anussim ⁶	Balearic Is.	6,000	..
Maiminen ⁷	Salonichi	4,000	..
G'did al Islam ⁸	Khorassan	2,000	..

Besides these, there exist a large number of persons, mostly in Europe, who have Jewish blood in their veins as descendants of Jewish converts. This is specially the case in Spain, where Jewish blood has filtrated through all ranks of society up to the very highest, and the same is said of certain districts of

¹ The best enumeration of Jews is by M. I. Loeb, art. "Juifs," in Saint Martin's *Dictionnaire de Géographie*: his chief errors are making the number of Russian Jews too low by a million, and the Falashas 200,000 instead of 50,000.

² Rohlf in Petermann "Mittheil," 1883, p. 213.

³ Serour, "Les Daggatouns," 1880. I include in this number the Mavambu or Negro-Jews of the Loango Coast (*vide* Andree, "Volkskunde d. Juden," 1881, p. 90).

⁴ Census of India, 1881, gives 7,952 Jews in British Bombay.

⁵ "Jüd. Littblt," 1883, No. 86. The number of Jews in China is unknown.

⁶ Descendants of Spanish Jews still isolated. Lewin, *ibid.*, No. 80.

⁷ Descendants of followers of the Jewish "Mahdi," Sabbathai Zebi. Graetz in "Monatst." 1884, Feb.

⁸ Jews forcibly converted to Islam thirty years ago, "Vesillo Israel," April, 1884.

mid France. The anthropology of Jews can never be satisfactorily settled till careful examination of these various data has shown their resemblances and differences. From the common qualities of classes A and B we can determine qualities due to religion; from those common to A and C, but differing in B, we might draw valuable conclusions as to influences of race. As a matter of fact, for the second and third classes we have practically no data to work with, except the vague impressions of travellers, and we must therefore confine our attention to the two chief divisions of Jews: (1) Sephardim, mostly descendants of the refugees from Spain in 1492, and now residing on the littoral of the Mediterranean,¹ and (2) Ashkenazim, dwelling in all the countries inhabited by Teutons or Slavs. The latter form an overwhelming majority (93 per cent.), and our information about them is tolerably extensive and reliable.

What are the qualities, if any, that we are to regard as *racially* characteristic of Jews? Much vague declamation has been spoken and written on this subject. All the moral, social, and intellectual qualities of Jews have been spoken of as being theirs by right of birth in its physical sense. Jews differ from others in all these points, it is true, as I have partly shown elsewhere.² But the differences are due, in my opinion, to the combined effect of their social isolation and of their own traditions and customs, and if they have nowadays any hereditary predisposition towards certain habits and callings, these can only be regarded as secondarily racial, acquired hereditary tendencies which cannot be brought forward as proof of racial purity. If all the Johns and Maries of Europe were to be shut up in ghetti for a couple of centuries they would undoubtedly show peculiarities in habits and thought; they would develop a Johannine psychology, as it were, and most probably, as we shall see, a Johannine biostatics. And there is another reason why the psychological traits of Jews must be omitted for the present from any research which claims to be scientific. Science was to Condillac a hundred years ago only a well-constructed terminology (*une langue bien faite*); nowadays science is measurement accurately calculated. Now though I hope to show on some future occasion that the intellectual capacity of Jews, if not absolutely, is yet relatively measurable as compared with that of other Europeans, I should still hesitate to qualify these distinctions as racial in a strict sense. They seem more a matter of temperament, which is at best but the tone of race, and is much more modifiable by education and environment than

¹ I have reckoned in with the Sephardim the Italian Jews and those under Moslem rule.

² *Vide* my "Studies in Jewish Statistics" (*Jewish Chronicle* Office).

purely racial characteristics, so that it may happen that widely diverse races, *e.g.*, Jews and Frenchmen, may have much the same temperament. Under any circumstances it would be difficult for a Jew to avoid subjective bias in dealing with these matters, and where that bias leads to any assertion of superiority the result is as unsatisfactory from the point of view of science as it is from that of taste. It remains then to consider those qualities of Jews which depend on physical properties, and these have the further advantage of lending themselves to accurate measurement. These are (1) the vital statistics of Jews—marriages, births, deaths, diseases—and (2) their anthropometry or bodily measurements.

I. *Vital Statistics.*

As I have already given in my "Studies in Jewish Statistics" the results of my search among statistical publications on Jewish biostatics, I will here content myself with giving a summary of the conclusions at which I have arrived. These are as follows:—¹

1st. Jews have a less marriage rate, less birth rate, and less death rate than their neighbours, but the less marriage and birth rate are due in large measure to the less mortality of Jewish children. The larger number of children living causes the percentages of marriages and births, really larger as regards adults, to seem smaller when reckoned on the whole population.

2nd. Jews and Jewesses marry earlier than the surrounding populations. Cousins intermarry more frequently, perhaps three times as often.

3rd. Jews have larger families, though fewer plural births. On the other hand, mixed marriages between Jews and persons of other race are comparatively infertile.

4th. In Jewish confinements there are more boys, less still-births, and fewer illegitimate births, though the advantage as to still-births disappears among Jewish illegitimate children.

5th. Jews have a smaller mortality of children under five, but this does not hold of Jewish illegitimate children, who die off at much the same high rate as the unfortunate beings of the same class in other sects. Jewish deaths over sixty are generally greater in proportion. Jews commit suicide less frequently.

6th. It has been frequently asserted that Jews enjoy an immunity from certain diseases, notably phthisis and cholera, but the evidence I have on this point is adverse to the claim. There is some indication that they are more liable to diabetes and haemorrhoids, and they have certainly more insane, deaf-mutes, blind, and colour-blind persons.

¹ *Vide my "Studies," No. VII, pp. 49 et seq.*

7th. I would add two social facts of great importance in their bearing on vitality: (a) the vast majority of Jews live in cities; (b) Jews have a larger proportion of poor than the peoples among whom they dwell ("Studies," II and IV).

This long list of divergences between Jewish and general statistics might seem at first sight to imply strongly marked racial differences. But when closely examined, almost all of them are seen to turn on social characteristics. Thus the frequency of consanguineous marriages and the smaller proportion of illegitimate births and of suicides are clearly due to social causes. The same may be said of the earlier age at which Jewish marriages occur,¹ and from this follow their greater fertility, and probably the larger proportion of male births. Again, if less still-births and less mortality under five among their offspring were physical characteristics of all Jewesses, we should find them to some extent at least among illegitimate Jewish births and children.² But as a matter of fact the superiority is confined to legitimacy, and must therefore be attributed for the most part to social causes, the greater care taken of Jewish children, and of Jewish mothers. Thus we are left with only four biostatistical points which cannot be *prima facie* resolved into social phenomena, and may therefore be referred to influences of race. These are—(1) the less number of twins and triplets; (2) the infertility of mixed marriages; (3) the greater longevity of Jews; (4) their alleged special morbidity or liability to disease. The paucity of plural births we may dismiss, as nothing is known of the cause of these.

Infertility of mixed marriages deserves more attention, owing to its important bearings on the main question of this paper. As I may claim to have first drawn attention to the subject, I will here repeat the evidence on which I found it. In Prussia these marriages have been separately registered since 1875, and between that year and 1881 there were 1,676 such marriages, resulting in 2,765, an average of 1.65 to a marriage, whereas during the same period pure Jewish marriages resulted in an average of 4.41 children, or very nearly three times as many ("Zeit. Preuss. Stat." 1882, p. 239). In Bavaria, between 1876 and 1880, 67 mixed marriages were registered, the resulting offspring being only 76, or only 1.1 per marriage, against 4.7 children to purely Jewish marriages ("Zeit. Bay. Stat." 1881, pp. 188, 213). This conspicuous infertility also implies greater

¹ The earlier age of puberty may influence this, but I have shown the importance of social and religious causes in my "Studies," VII, where I attempt to connect this phenomenon with the fertility of Babylonian palms.

² F. J. Neumann was the first to use this crucial test (Brentano's "Jahrbuch," 1877).

sterility. Among 56 such marriages where I could ascertain the results, no less than 9 were sterile (18 per cent.), a striking contrast to the number of sterile marriages which I found in 71 marriages between Jewish cousins, where the percentage of sterility was only 5·4 per. cent. (*cf.* "Studies," p. 7). At the same time I must add that I found no other ill results. Of 85 families, only 2 were afflicted, about the same number as would be found among Jews in general, whereas 84 first cousin marriages included no less than 13 in which there were deaf-mutes or lunatics. The uniform infertility of mixed marriages can scarcely be due to any uniformity in the ages of the contracting parties, the chief determining factor of fertility, so that we may take it as a racial phenomenon, or, to make a rather fine distinction, as a phenomenon indicating racial differences.

The *longevity* and *vitality* of Jews are by no means so universally superior as has been thought; the superiority disappears in large measure among Jewish populations which, like those of Galicia and Russia, have a large proportion of day labourers.¹ So far as it is founded on the low death rate, it can be attributed rather to the greater care taken of children under five, which after all means that more weakly individuals are kept alive to carry on an unequal struggle for existence. It certainly would appear extraordinary if Jews enjoyed exceptional vitality, considering the insanitary conditions of their lives in the past, and their weakly constitution in the present. I have been able to obtain some details of the way in which they used to be overcrowded in the ghettos—

Place.	Date.	Jews.	Houses.	Average.	Authority.
Prague ..	1786	7,951	266	29·3	Ficker's "Bevölk. Böhmen," p. 55.
Frankfort ..	1811	2,214	159	13·9	<i>Times</i> , Aug. 8, 1884.
Prague ..	1843	5,646	279	20·3	Ficker, <i>ibid.</i>

And Tchubinsky reports that in 1840 the Jews of Southern Russia used to dwell thirteen in a house, whereas the general population had only from four to five ("Globus," 1880, p. 340). So, too, the military statistics show an extraordinary number of individuals who are unsuitable for military service owing to their weakly constitution (*cf.* Goldstein's paper in "Revue d'Anthropologie," July, 1884). And where any superiority in vitality is

¹ Cf. Bergmann, "Beiträge," 1883, pp. 145-6.

shown, this again may be traced to moral and social causes. Jews do not lead "dangerous" lives in the insurance sense (sailors, soldiers, firemen, miners, &c.). The trades which they do exercise, except that of tailoring, seem more long-lived.¹ Further, the Jewish nature does not seem to require stimulants, and Jews are markedly free from alcoholism. The tranquilising effects of Jewish family life, the joyous tone and complete rest of the Sabbath and other festivals, the unworrying character of the Jewish religion, are all important in the difficult art of keeping alive. The greater care taken of Jewish women, who more rarely take to manual labour, aids also in producing good results in the tables of mortality. I attribute much importance, too, to the strict regulation of the connubial relations current among Jews.²

I am unable to attribute much beneficial influences to the Jewish dietary laws, though the matter requires careful and unbiased examination. These may be divided into four divisions, developed in chronological sequence—(1) the Biblical distinction of clean and unclean (Lev. xi); (2) the Talmudic method of cutting the animal's throat (*Shechita*) for the purpose of removing the blood; (3) *Bedika*, or examination of the chief organs to see if there are any lesions, developed after Talmudic times; (4) *Melicha*, or putting the flesh into salt and water to remove the blood; the origin of this is uncertain, nor is it clearly mentioned in the Talmud. It may have some connection with the practice of using salt with sacrifices (Lev. ii, 13). (1) The diet prescribed by the Bible, as by all Oriental legislation (Manu, Zoroaster), was doubtless due to a rough induction from popular experience. Apart from a few anomalies,³ it coincides in the main with the dietary of all civilised peoples with whom the ruminants, being the chief domestic animals,

¹ The indefatigable Korsei has given from Schimmer statistics showing that while 37 per cent. of Catholics (over 14 in Buda Pesth) followed certain trades of high mortality, and Protestants about 33 per cent., Jews had only 22 per cent. in these industries ("Pest in 1870," p. 45).

² Query: may this custom of separation (Lev. xv, 19) have any connection with Jewish proficiency in music, which in its origin seems to be also regulated sexual emotion? (cf. Darwin, "Descent," p. 578, and Gurney, "Power of Sound," chap. vi, pp. 116-121).

³ It is possible that some of these anomalies may be explained as survivals of totem worship derived by the ancient Hebrews from the Canaanites, or existing among themselves. Even in Ezekiel's time the Jews worshipped "every form of creeping thing and abominable beasts" (Ezek. viii, 10), and it has been contended that they worshipped totems, and no member of a totem clan will eat the totem animal. When, therefore, we find Jaazaniah ben Shaphan (i.e., son of the Coney or Rock-badger) in the same passage (verse 11) officiating as high priest at these totem-rites, totemism is given as the reason why the coney was included among the taboo'd food of the Israelites (Lev. xi, 5). On the whole subject cf. Prof. Robertson Smith, "Journal of Philology," 1880.

form the staple diet. The chief exception is, as is well known, the use of pork. This has been found to be injurious in hot climates, but in northern latitudes the chief danger has been found to be from trichinosis. So far as this affects vitality, Jews are undoubtedly free from this source of danger, but it scarcely seems to be prevalent enough to affect the death rate. (2) *Shechita* seems to have been originally confined to animals intended for sacrifice on the principle that "the blood is the life," and that this must be entirely spilt. It was afterwards extended to secular food, and it is nowadays contended that the removal of the blood is a safeguard against waste-products contained in it. Whatever advantages this gives must also be enjoyed by Mohammedans, who have borrowed it, as well as the Biblical distinction between clean and unclean, from the Jews. As a matter of fact, it does not remove all the blood, since Jewish practice requires a further process, insertion in salt and water (*Melicha*), to ensure this. (3) The *Bedika*, or examination of the internal organs, seems based on a correct principle,¹ but it has never been ascertained how far this is carried out in practice; it certainly does not ensure immunity from tubercle, as we shall shortly see. (4) About this it is sufficient to say that it does not effect its purpose. The originators of these practices, I may add, did not claim any medical validity for them, carefully distinguishing cases where food should not be eaten for medical, as opposed to religious, reasons. Some Jewish writers have even declared the flesh of the swine to be highly nutritious (*cf.* Kalisch on "Leviticus," II, p. 82).

These practices certainly do not secure *immunity from* any special *diseases*, as has been claimed for them in recent years, especially as regards cholera and phthisis. We now know that the Jews fell victims to the Black Death as much as their neighbours (Hoeniger, "Der Schwarze Tod in Deutschland," 1881). As regards cholera, the only favourable result I can find is a strong tradition that Jews suffered less from it when it visited England in 1834, and last year at Marseilles their death rate from it was only 2 per 1,000, against 5 of the general population ("Vessillo Israel," September, 1884). On the other hand, I find in 1873 the mortality from cholera in Hungary greatest where there were most Jews, *e.g.*, 63 per 1,000 in Drohobycz, where half the inhabitants are Jews ("Statist. Monatsft," 1875, p. 136). In Smyrna, 1848, mortality from this pest carried off 1 in 26 among Jews, 1 in 40 among Moham-

¹ It is scarcely likely, however, that the Rabbins were in any sense anticipators of Koch and Pasteur, for they considered the function of the lungs to be to absorb the liquids of the body. See Talm. Bab., Beracoth 60 a, a passage which shows them to be by no means in advance of Hippocrates and Galen.

medans, $\frac{1}{3}$ Greeks, $\frac{1}{5}$ Catholics, $\frac{1}{10}$ Armenians (Burguière's "Etudes sur la Cholera & Smyrne," Paris, 1849, in A. Hirsch "Hist.-Geog. Pathologie," 1st edit., I, 129); and Bonnafont noticed the same for Algiers (*ibid.*), and Lombroso for Verona (Legoyt, "Immunités," p. 65). The alleged immunity from tubercular disease disappears in the same way on reference to definite results.¹ In Verona, 1855-64, Lombroso found among 272 Jewish deaths 6 per cent. from phthisis, against 7 per cent. among Catholics, and in an Hungarian district Glatter found this disease (*Lungentuberkulose*) causing 14.4 per cent. of 473 Jewish deaths, against 16.9 Magyars, 16.4 Slovaks, and 19.5 Servians, but against only 13.5 of German deaths.² (Casper "Vierteljahrsschit," XXV, p. 48). These are the only favourable statistics, and by no means exceptionally so. Here in London, of 1,215 deaths attended by the medical officer of the Jewish Board of Guardians 1862-71, I have found that no less than 159 were due to tubercular disease, 13.1, against 11.3 for the Whitechapel district for the same period (Registrar-General's Report, XXXV, Suppt., p. 37). I find phthisis especially prevalent among Jews in Egypt according to Pruner, in Algeria according to Haspel, Bertheraud, and Pietra Santa (Hirsch, II, 95), and in South Russia according to Tchubinsky ("Globus," 1880, p. 377). Strong confirmatory evidence of the last statement may be seen in the fact that among the Russo-Jewish recruits of 1877-8 no less than 4 per cent. were dismissed for phthisis (a disease that cannot be "malingered"), against only 1.3 of the Polish recruits (Goldstein in "Revue d'Anthrop.," 1884, p. 470). We cannot therefore, in the face of these facts, claim any immunity from phthisis for Jews. No claim has been made for freedom from zymotic diseases; such immunity would be but a doubtful boon, as it would only leave freer field for the demon Bacillus to batten on, and the same might be said of the alleged immunity from phthisis. Syphilis seems to be less prevalent among Jews;³ but this may be due to moral causes,

¹ On this see Dr. H. Behrend, "The Communicability of Diseases of Animals to Man" (*Jewish Chronicle* Office). Unfortunately, Dr. Behrend has undertaken to show why the practice of *Bedika* should produce immunity from phthisis before ascertaining whether the immunity exists. And certainly he proves too much in the pamphlet referred to when he points out that 80 per cent. of animals slaughtered are infected with tuberculous disease. For only about 42 per cent. are rejected by the Jewish butchers, many of them merely for faults in the mode of slaughter.

² On the other hand, Jews had 4.7 of deaths from tubercular cerebral inflammation, against 2.2 Serbs and Slovaks, 2.6 Magyars, and 1.5 Germans.

³ Dr. A. Cohen, late Senior House Surgeon of the Metropolitan Free Hospital, has kindly given me the following details of the venereal cases coming under his notice during hospital practice in 1882-3. The numbers are those of all the venereal cases; the percentages in the first two rubrics, those of syphilitic cases;

and in so far as it is the result of circumcision¹ it is clearly not racial. The smaller proportion of congenital cases follows from this, and is thus only secondarily racial.

But if we cannot claim for Jews any racial immunity from special disease, neither can it be asserted that they are liable as a race to any, such as haemorrhoids and diabetes. So far as these are prevalent among Jews they are due to sedentary habits. Even the most widely spread of Jewish diseases, insanity, blindness, and deafmutism, can be traced in part to their life in towns, their mental activity, and exciting occupations. With regard to deafmutism, I am inclined to lay some weight on an explanation which is nowadays thought to be exploded, viz., the influence of consanguineous marriages (*cf.* "Studies," p. 8, and *supra*, p. vi). Thus on examining some 28 families of children at the Jews' Deaf and Dumb Home, Walmer Road, I find that families where the parents are unconnected have 1.2 mutes per family, those where the parents are second cousins 1.5, and where the parents are first cousins there is an average of 3 mutes per family. The numbers are too small to enable us to draw definite results, but they suggest the need of further inquiry into this point.

Thus throughout our review of Jewish biostatistics we have failed to find any phenomenon which was uniformly present in all Jews that could not be referred to social causes. No doubt there is reciprocal influence between nurture and nature, and the Jewish organism may show some traces of the beneficial influence of Jewish training, as it certainly shows traces of the

the complementary ones would give those of gonorrhœa. The percentages relating to children are those of congenital syphilis observed in the number of children examined.

	Men.		Women.		Children.	
	No.	Per cent.	No.	Per cent.	No.	Per cent.
Jews	122	17.8	10	20.0	153	8.3
Others	539	62.0	192	62.6	367	15.8

The number of Jewesses affected altogether was too small to afford trustworthy results. The proportion of Christian to Jewish patients was about three to one, the hospital being in the centre of the Jewish quarter of London.

¹ No investigation of the effects of this very widely spread custom (*cf.* Andree, "Arch. f. Anthr.", xiii, pp. 53-78; Ploss, "Das Kind," I, pp. 342-372) on venereal diseases has been made. It certainly does not produce immunity from gonorrhœa, which is mentioned both by Bible (Lev. xv, 2) and Talmud (Bergel, "Medizin des Talmuds," p. 40). On the possibility of an Egyptian origin of circumcision see Welcker in "Archiv. f. Anthropol.", x, p. 123. The phallus examined was of the fifteenth century B.C.

ill-effects of the environment in the bodily measurements to which we shall soon turn. But these influences are, in the first instance, social, not racial, and *cannot therefore be adduced to show common origin*. If we may restrict the word "Jewish" to properties due to the origin of Jews, and "Judaic" to whatever is due to their religion or customs, we may say that their biostatics is Judaic, not Jewish. To revert to our original illustration, if the Johns and Maries whom we imagined cooped up in ghetti had married as early, treated their children as tenderly, if the Johns had nurtured the Maries as well, if they had had the same pleasing family life and care of poor by rich, as Jews, they would have developed a Johannine biostatics largely resembling the Jewish. But these Johannine qualities would not be due to common origin, and would therefore be what I have termed "secondarily racial," and so it *may be* with Jewish qualities. So far as Jews enjoy certain vital advantages over their neighbours these depend on the simple antique virtues and customs of the Jews and Jewesses of past and present. These advantages will persist as long as the virtues remain, and disappear, as in some respects they are disappearing,¹ when the bonds of religion and tradition are relaxed.

We turn then in our search for purely racial characteristics of Jews to the measurements of their outward qualities, to their

II.—*Anthropometry.*

It might seem impossible that we should be disturbed here by having to consider any social factors. Yet, as regards two important sections of anthropometry—height and girth—social considerations have great weight, and, indeed, it would not be impossible to show their influence on colour-blindness, on the shape of the skull, which alters with increased mental activity, and perhaps even on the colour of the hair and eyes, which are not, in the long run, independent of quality and quantity of nutrition. But, on the whole, we may neglect these disturbing causes and take the following measurements as distinctive of the Jewish race at the present day, leaving for later consideration the question how far they indicate purity of race.

Height and Girth.—Jews are nowadays the shortest and narrowest of Europeans (excepting, perhaps, Magyars as regards the former), as the following sets of measurements will show:—

¹ The rate of illegitimacy and of suicides has been rising while the death rate is rising relatively to the surrounding populations, and the excess of male births is falling.

No.	Country.	Height.	Span.	Girth.	Authority.
6592	Poland ..	161·2	..	80·1	Snigerew, "Revue d'Anthrop.," 1884, p. 470.
4372	,, ..	161·1	..	..	Uke, in Andree, "Volkskunde," p. 82.
826	Galicia ..	162·3	..	79·4	Majer and Kopernicki, "Charak, Fizyck, Galic," pp. 37 and 59.
810	Hungary	163·3	..	..	Scheiber, "Arch. f. Anthropol.," xiii.
130	England	170·8	..	89·5	Jacobs. ¹
100	Russia ..	162·7	168·1	84·2	Blechmann, "Anthropologie."
72	Various..	163·2	..	84·6	Weisbach, "Körpermess."
20	Russia ..	163·7	170·7	..	Schulz, from Blechmann.

In the British Association Report for 1883 there is a list of heights of eighty-five different races, among which English Jews come thirteenth with 169·2 cm., and Polish Jews, according to Majer and Kopernicki, as low down as seventieth. Again, in a list of 122 racial heights by Weisbach ("Novara Expedition," pp. 216-217), Jews come seventy-sixth with Schulz's measurement, and would be much lower down with 162·1 cm., the mean of the above 12,922 measurements.

I may mention that the Jews measured for the British Association were of the higher social grades, and their superiority over the other Jews is undoubtedly the result of better nurture. The smaller height of Jews may thus be partly due to their residence in cities ("Brit. Assoc. Report," 1883, p. 284); tailors are also the smallest of men, and a much larger proportion of Jews are tailors. Goldstein has determined from Snigerew's measurements that Russian Jews have a smaller chest-girth, both absolutely and relatively, than other Russians, and he therefore credits them with a less "index of vitality." ("Revue d'Anthropologie," 1884, p. 481.) Other bodily measurements have been too sporadic for record, being limited to 19 examined by Weisbach, 20 by Schulz, and 100 by Blechmann.

Craniometry.—The few results reached in this branch of anthropometry seem to show that Jews are predominantly brachycephalic, and are not physically long-headed. Only thirty-four skull measurements are given by Stieda ("Arch. f. Anthropol.," xiv, 68) from Pruner-Bey, Welcker, Davis, Weisbach, and Dusseau: these give an average index of 77·3. To these I would add fifteen given by Lenhossék ("Cranioscopia," p. 167), with an index of 80·5, and five of Italian Jews, which I calculate

¹ From the measurements made for the British Association by Dr. M. Davis, who kindly lent me the results.

from Legoyt ("Immunités," p. 66) to have the same index. All the fifty-four skulls would therefore give a mean index of 78.5, more meso-cephalic than otherwise. But the larger number of measurements on the living subject give results as follows:—

No.	Index.	Dolicho-	Meso-	Brachycephalic.	Observer.
67	82.2	19.4	26.9	53.7	Dybrowski.
100	83.2	8.0	11.0	86.0	Blechmann.
813	83.5	4.8	10.9	84.3	Kopernicki.
880	83.4	8.1	16.6	75.3	Average.

With the larger numbers the brachycephalic character of the Jewish head seems to come out very distinctly. It is to be observed that Majer and Kopernicki considered that the ooidal head went with blonde hair, the brachycephalic with dark; but the number of long heads examined by them was small (fifteen) and Blechmann found one of his dolichocephalic subjects with dark hair. He also asserts, without a particle of evidence, so far as I can see, that Sephardic Jews are dolichocephalic. Dr. Beddoe, indeed, states that Ashkenazim have mostly "oidal" heads, but the above statistics only show how untrustworthy mere impressions are, even when those of a trained observer.

Hair, Eyes, and Complexion.—Here we reach somewhat more definite results, based upon nearly 120,000 measurements I have collected in the table on the following page.

From these figures we see that though Jews are darker both in eyes and in hair than any of the other nationalities, they have about 21 per cent. blue-eyed and about 29 per cent. blonde-haired, and have thrice as many red-haired individuals as either Poles, Russians, or Austrians, and half as many again as Germans. It may be remarked that anthropologists are inclined to consider dark-haired races better fitted for the struggle for existence (F. Galton, "Record," p. 8; Schimmer, "Erhebungen," p. xxiv). The significance of these results as regards the question of purity of race will concern us later. Meanwhile I would supplement the above list by one compiled by me from Dr. Beddoe's results in his paper "On the Physical Characteristics of the Jewish Race" (Ethnol. Trans., 1869).

These were the first published on the subject, and differ slightly in arrangement from the above, which mostly follow Virchow's epoch-making investigations into this subject. Dr. Beddoe examined 665 individuals in different places, and by taking the Jews of Turkey, Rome, and the Sephardic congregation

Place, Number, and Authority.	Race.	Eyes.			Hair.			Skin.
		Blue.	Grey.	Brown.	Blonde.	Brown.	Black.	
I. <i>Austria</i> (59,808 Jews, Schimmer, "Erhebung," 1835)	Jews .. Austrians ..	23·5 34·3	30·6 33·4	45·9 32·3	27·0 44·9	55·4 49·2	16·9 5·6	0·6 0·2
II. <i>Prussia</i> (c. 50,000, Virchow, "Zeit. f. Ethn.," 1876, p. 17) ¹	Jews .. Prussians ..	18·7 43·0	29·8 32·7	53·5 24·3	32·4 72·2	55·5 26·1	10·1 1·2	0·5 0·3
III. <i>Bayaria</i> (7,054, Mayr, "Zeit. Bay. Stat.," 1875) ²	Jews .. Bararians ..	20 29	31 37	49 34	30 54	50 41	20 5	....
IV. <i>Buda Pesth</i> (3,141, Korossi, "Ann. de Demog.," I, p. 137) ²	Jews .. Hungarians .. Germans ..	18·3 29·0 29·3	24·2 25·9 30·6	57·5 45·1 40·1	23·7 50·7 55·4	57·0 45·4 38·9	19·3 3·7 5·7	......
V. <i>Württemberg</i> (1,995 Trass, "Centralbl. Anthropol.," 1876, No. 12) ²	Jews .. Württem.	20 32	28 33	52 35	31·5 61·8	57·0 36·0	10·6 1·6	0·9 0·6
VI. <i>Galicia</i> (526, Majer and Kopernicki, <i>loc. cit.</i> , pp. 88, 180) ²	Jews .. Poles .. Ruthenians ..	23·0 34·0 31·5	24·1 46·9 19·6	52·9 29·1 38·7	23·2 45·0 31·9	63·7 49·5 54·2	13·1 5·5 13·9	4·5 1·2 1·4

¹ Virchow does not give number of Jewish children, but as there were 4,127,766 in all, and Jews are 1·8 per cent. in Prussia and have more children, they cannot have been much less than 60,000.

² Adding green to blue and chestnut to brown to make the results uniform.
These results must be taken with the restriction that, as the Anthropometric Committee of the British Association point out (Report, 1888), the hair and eyes of schoolboys grow darker as they grow older.

of London as Sephardim, I am enabled to give some data for distinguishing between Sephardim and Ashkenazim as follows:—

Eyes.				Hair.				
	Light.	Neutral.	Dark.	Red.	Fair.	Brown.	Dark.	Black.
290 Seph.	20	12	68	3·5	3·5	15·7	40·0	37·3
375 Ashk.	27	14	59	1·1	2·6	17·0	45·6	32·7

The differences are not very striking, with one remarkable exception: Sephardim have three times as many red-haired as Ashkenazim.

Colour-blindness may be taken here, though perhaps belonging to morbidity. The following table exhibits the chief results hitherto obtained, which are practically decisive of Jewish inferiority in this respect, due doubtless to the greater poverty of Jews and their long confinement in towns:—

No.	Place.	Jews.	Others.	Authority.
814	Breslau ..	4·1	2·1	Cohn, "Centblt. Augenkunde," 1878, p. 97.
949	London (boys)	4·9	3·5	"Trans. Ophth. Soc.," I, p. 198.
780	" (girls)	3·1	0·4	<i>Ibid.</i>
500	Frankfort ..	1·8	2·9	Carl, "Untersuchungen," 1881.
500	Italy (boys) ..	2·9	2·7	Ottolenghi, "Gaz. Cliniche," 1883.
420	" (girls) ..	0·0	..	<i>Id.</i> , "Veasillo Israel," Sept., 1884.

Ottolenghi, from whom I take Cohn's and Carl's results, observed that three out of his thirteen cases were cousins, two of whom had a maternal grandmother also colour-blind. The Ophthalmological Society's results were obtained from the poorly nurtured children of the Jews' Free Schools, Bell Lane and Greek Street.¹

Nose.—This feature is the one usually regarded as distinctive of the Jew, and is also considered anthropologically important (Topinard, "Anthropology," p. 358). I therefore give the few data I can gather as to its length and shape. Weisbach's nineteen Jews vied with the Patagonians in possessing the longest nose (71 mm.) of all the nineteen races examined by him (Andree, "Volkskunde," pp. 32, 33), while they had at the same time the narrowest noses (34 mm.). Blechmann's century of Jews, on the other hand, had an average length of 51·9 mm., and breadth

¹ Query: may the colour-blindness of Jewish girls account to any extent for their choice of primary colours for dresses?

35.9, giving a nasal index of 69.6 ("Anthropologie," p. 33). As regards shape, his results are—2 short, 10 broad, 2 *retroussé*, 4 flat, and 84 straight, while Majer and Kopernicki give the following table (p. 187):—

	Poles.	Ruthenians.	Jews (742 in number).
Curved-aquiline ..	6.4	6.1	30.9
Straight	67.4	68.1	59.6
Flat	7.5	11.2	2.9
<i>Retroussé</i>	18.7	14.6	6.6

But that one saw it "in print," most persons would doubt the possibility of meeting Jews with noses "tiptilted like a lily."¹

Lips are another characteristic feature of Jews, but the only measurements I know of are those of Blechmann, who gives 54 thin, 31 moderately thick, and 17 thick ("Anthrop.," *loc. cit.*), a result rather opposed to one's preconceived notions about the thick lips of Jews.

Expression.—Turning from the separate features of the Jewish face to that combination of them which we term expression, it might seem impossible to give anything more than subjective impressions. Thanks, however, to Mr. Galton, science has been enabled to call in the aid of photography to obtain those averages which no measurements can supply. Some two years ago I applied to him to know whether he would assist me in obtaining composites of Jewish faces, and to this he was kind enough to consent. A number of photographs of Jewish boys were taken at the Jews' Free School, through the kindness of Mr. Angel, the well known head-master of that admirable institution, and Mr. Galton was good enough to compound them in the way familiar to all here (*vide* F. Galton, "Inquiries into Human Faculty," App. B, III). Plates I and II contain a number of the results, together with the individual components from which they were compounded.² It will be observed that in the composite (C) containing the largest number of components (thirteen) the face has distinctly what is termed a Jewish expression, though it is full-faced. It follows that the peculiar expression known as Jewish cannot be due to the droop of the nose alone. The full lips, the heavy eyelids, and large irides have much to do with it. So far as the nose is concerned it is the flexibility of the *alæ*, or wings

¹ Harim (1 Chron. xxiv, 8) and Harumaph (Neh. iii, 10) were flat-nosed if their names do not belie them. Roven Salomo, a Jew of 1847, figured in "Revue d. Études Juives," No. 12, has a distinctly concave nose.

² See explanation at end of paper, p. 53.

of the nostrils, that are distinctive rather than its curvature.¹ I may add that an artist friend has pointed out to me that a figure 6 with a long tail gives the best caricature outline of the Jewish nose, and here again the importance of the *alæ* is manifest. In the profile co-composite (G) containing ten Jewish noses rolled into one, it will be noticed that the outline is blurred, *i.e.*, not typical, while the accentuation of the *alæ* is clearly marked, and lips and chin are tolerably distinctive. The actual expression in the various composites varies to some degree, and it is a doubtful point whether the peculiar intensity of the Jewish gaze (well exhibited in composite D) is not due to long residence in ghetti and the accompanying social isolation. I fancy at least that it disappears to a large extent in Jews who pass very much of their life among Gentiles. At the same time something like it may be traced throughout the history of Art, and I may refer to one of the earliest representations of Jews in Art, the Assyrian *bas relief* of the captive Jews of Lachish (B.C. 701) being taken before Sennacherib (see Sayce, "Fresh Light," p. 145). The subject is undoubted and well known, and the persistency of the Jewish type for the last 2,600 years is conclusively proved by it. But a careful examination shows that the Assyrian artist gives the Jewish captives very much the same type of face as their captors, the chief difference consisting in the fact that the Jews have the beard cut, the usual sign of captivity. The female slaves behind Sennacherib's throne might have been taken from the synagogue galleries of to-day, and yet we have no warrant that they are Jewesses. The *relief* then shows not only the persistency of the Jewish type, but its practical identity with the ordinary Semitic type of those days. I possess a photograph which shows the same at the present day: I bought it thinking it to be a collection of Eastern Jews, and found out afterwards that it was a *séance* of Syriac Mohammedans.²

III.—*Historical Data.*

And this leads me to the main subject of this paper—the question of the purity of the Jewish race. M. Renan, who re-

¹ Query: may this aid histrionic expression? George Eliot gives the Alcharism, "a play of the brow and nostril which made a tacit language" ("Dan. Deronda," p. 469).

² Before leaving the anthropometric data I should have referred to the earlier age at which menstruation appears among Jewesses. Raciborski, "Traité de la Menstruation," 1869, p. 630, puts it at 14 years 3 months and 25 days, which would place them earliest in Topinard's scale ("Anthrop.," p. 366), except for Southern Asia. Cf., too, Ploss, "Das Weib," i, 148. The matter requires further investigation.

cently expressed his regret that he did not give his youth to science, as he would have certainly anticipated Darwin, has made his first incursion into scientific fields in an examination of this question ("Le Judaïsme comme race et comme religion," Paris, 1883). His results are mainly against the racial purity of the Jews, and in this conclusion he has been followed by M. Isidore Loeb in an excellent article, *Juifs*, in Saint Martin's "Dictionnaire de Géographie," and we have just heard how Dr. Neubauer upholds the opinion of his illustrious friend. Notwithstanding the authority which must attach to such names when dealing with a matter mainly historical, I hope to show that the last word has not been said on the subject, and that anthropological science in particular has certain considerations to suggest which must give us pause before accepting the conclusions at which these authorities have arrived. The whole question is very complicated, and I will attempt to give the strongest arguments on both sides, beginning with those unfavourable to the purity.

(1) *Proselytism*.—The question of the former intermarriage of Jews and Gentiles resolves itself into that of proselytism, since Jewish law does not recognise *matrimonium* with a person of another belief.¹ But in the early days of Israel this was not the case. After the conquest of Canaan, the Israelites entered into frequent connubial relations with the conquered. We may perhaps see a reference to the beginning of this process² in the curious tradition about the Judge (or Baron) Ibzan of Bethlehem who, we learn (Jud. xii, 9), "had thirty sons and thirty daughters: the latter he sent abroad and took in thirty daughters from abroad for his sons." But such intermarriage with the daughters of Canaan are of little significance from the anthropological point of view.³ For there was no such diversity of type among the Semites as among the Aryans. The Semitic languages differ from one another only as the Romance tongues do, and do not show such wide differences as those between Russian and Welsh. We have already seen that Jews and Assyrians of the eighth century B.C. were of practically the same type. The distinction between Jews and other Semites was religious, not racial. The strenuous prohibition of Ezra against marriage with strange women was directed against idolatry rather than exogamy. For even before this date we

¹ *Vide* Frankel, "Grundlinien d. mos. Ehrechts," p. 22, and Ritter, "Philo," p. 71. Philo makes the prohibition even stronger, taking Deut. vii, 3, as binding with regard to all nations.

² Query: was this a case of exogamy with other Israelite totem-clans? (*cf. supra*, p. 29, note.)

³ Jewish tradition recognised Ammonites, Moabites, and Idumeans to be of same race (*cf. Wellhausen*, art. *Israel*, "Ency. Brit.," "History," p. 429).

find traces of proselytism in the Bible.¹ The second Isaiah (lvi, 6) speaks of "the sons of the stranger who join themselves under the Lord." The late book of Esther also refers to proselytes (viii, 17; ix, 27), while three of the later Psalms (Ps. cxvii, cxviii, cxxxv), possibly of the second century B.C., divide Jews into three classes—"the House of Israel," "the House of Aaron," and "those who fear the Lord." The last became the technical expression for proselytes among Hellenistic Jews (Acts, *passim*). So numerous had these proselytes become that they were classified according to the motives which led to their conversion. There were Proselytes of the Lion—from fear; Proselytes of the King's table—from ambition; Proselytes for a wife; and there was a grand division made between Proselytes of the Gate, who did not observe the most stringent of the Mosaic regulations, and Proselytes of Righteousness, who were even as Jews in all that concerned the Mosaic precepts. Now it is only with the latter class that we are concerned, since only these had the full *jus connubii* with persons of Jewish race and religion. It is therefore of critical importance to know whether any of the many proselytes mentioned by Josephus, the New Testament, and the Talmud were proselytes of the Gate or of Righteousness, the latter being the only ones that affect the main question. The Jews of Antioch only made the many inhabitants proselytes "after a fashion" (*τρόπῳ τριῶν* "Wars," VII, iii, 3), i.e., they were only Proselytes of the Gate. I am surprised to find a scholar like M. Renan omitting this cardinal restriction, which tells dead against his position.² St. Paul, in his addresses to the congregations at Antioch (Acts xvii, 16, 26), Thessalonica (xvii, 4), Athens (*id.*, 17), carefully distinguishes Jews and proselytes. And in a significant passage ("Wars," VI, ix, 3), the bearing of which has been overlooked by M. Renan and his followers, Josephus mentions that the foreigners who came to worship at Jerusalem

¹ For many of the following facts I am indebted to J. Bernays' masterly essay, "Die Gottesfurchtigen bei Juvenal," in the Mommsen presentation volume, and now reprinted in his "Gesam. Schrift.," ii, 71–80 (cf. Mayor's "Notes on Juvenal," xiv, 99, *et seq.*).

² M. Renan translates *Ayant amené à leur culte un grand nombre d'Hellènes ils en firent une partie de leur communauté* ("Le Judaïsme, &c.," p. 12). He should have added to the last clause some such phrase as *tant bien que mal*. Similarly in the translation of C. Apion ii, 39, M. Renan (p. 15) has not quite preserved the force of the Greek *πολλά*, which shows that the Greeks and *barbarians* referred to did not observe *all* the Jewish dietary laws, and were therefore not full proselytes. As a matter of fact they were not proselytes at all, nor does Josephus say they were. He is referring to the well-known fact that many other nations have customs similar to the Jews, e.g., the Sabbath or dietary laws and with his usual boastfulness pretends that they learnt them from the Jewish law. Only the fact that M. Renan intended his discourse for a conversation (p. 1) can excuse these slips.

were not allowed to share the Passover meal, *i.e.*, were only proselytes of the Gate. When Josephus calls Nero's wife, Poppea, a proselyte ($\theta\epsilon\sigma\epsilon\beta\eta\varsigma$), this can only mean that she was interested in Jewish doctrines: it cannot imply any adherence to Jewish customs. It was to this very class of proselytes of the Gate that Paul appealed, and founded Christianity by granting full religious rights to them. The triumph of Christianity meant, therefore, that this rapidly growing class were drawn off from Judaism to the new sect before they had been fully incorporated with the older body. After the wars with the Romans Jewish propagandism would have but little scope, as, indeed, M. Renan allows. So that for the existence of full proselytes during this period we have only the evidence of Juvenal, Dio Cassius, and Tacitus, who might easily be struck by a few examples of what they considered a barbarous custom.¹ The last says that Jews never intermarried ("Hist." v. 5).

So soon as Christianity became the State religion, proselytism would become dangerous. Severe penalties were placed by the laws against intermarriage of Jew and Christian, which was placed on the same footing as adultery (390 A.D., "Cod. Theod." LV, ii).² The Councils of the Church included similar injunctions as a matter of course, one set of canons following the preceding.³ The severity of the sentence is often enough to show how rarely the laws were transgressed. This, however, if any, was the time when any intermarriage could have taken place, owing to the kindly relations of Jews and Christians. Unfortunately, it is also the time (300 A.D.–800 A.D.) of which we know least about Jews. Before, however, we reach Charlemagne's epoch two instances of proselytism on a large scale occurred in the countries beyond civilisation, and these have naturally been emphasised by M. Renan and his followers. In South Russia the kingdom of the Cozars,⁴ situated midway between the Patriarchate of Constantinople and the Emirate of Bagdad, ingeniously evaded the necessity of acknowledging either of these powers by formally adopting Judaism, which both had to tolerate. The adhesion was scarcely more than

¹ See M. Derenbourg's temperate and judicious treatment of the question, "Essai," chap. xiv. With regard to converts at the Imperial courts (Graetz, "Die jüd. Proselyten," 1884), it is a great question whether for "Jewish" we ought not to read "Christian." I see an instance of this in Epict., "Disc." II, ix.

² Constantine appointed the punishment of death against such marriages ("Cod. Theod." xvi, 6).

³ Elvira (320), xvi; Chalcedonia (388), xv; Third Orleans (533); Macon (531); Third Toledo (589), xiv; Fourth Toledo (633), lxiii. Basnage, "Histoire," ix, 409–414.

⁴ St. Martin, "Les Khazars," 1851. Harkavy, in "Russ. Revue," 1876. For Arabic and Hebrew sources, see Carnoly, "Itinéraires de Sainte Terre," 1847.

formal, and there is little evidence of any great intermixture of pure Jews with these Cozars, except by the few learned Jews who taught them their creed.¹ These seem to have been of the Karaite sect, and we find still the headcentre of the Karaites in the Crimea, where the Cozars ultimately concentrated. All accounts represent the Karaites as perfectly un-Jewish in appearance, and I would venture to apply to them Napoleon's witticism, "*Grattez le Karaite et vous trouverez le Khazar.*"² The Cozars were crushed in the ninth century, while the Polish Jews, who are supposed to show signs of intermixture with Cozars, came into that kingdom from Germany long afterwards. Similarly, a somewhat earlier conversion of Arab tribes in Yemen has only left traces on contemporary Judaism in the Falashas, to whom Rohlfs also denies Jewish features ("Abessynien," 1884, p. 273). Karaites and Falashas, with the Daggatouns of the Sahara and the Beni-Israel of Bombay, are the only Jews of to-day who display alien blood, and these form only one per cent. of Israel, and never intermarry with other Jews.

After the age of Charlemagne no great intermixture of Jews and Aryans can be discerned. As Europe became Christendom, the Church isolated the Jews more and more by cutting them off from the trade guilds, originally religious, and from all civil rights: they became the King's chattels in a literal sense. The mere fact of their being cooped up in ghettos would be enough to put a bar in the way of frequent intercourse, and it was the true insight of an artist that made Sir Walter Scott regard a marriage between Rebecca and Ivanhoe as rendered impossible by the circumstances of the Middle Ages.³

To sum up this short sketch of Jewish proselytism, this undoubtedly existed before the spread of Christianity, but only or mainly so far as Proselytes of the Gate were concerned, who could not marry with Jews, and these were soon intercepted by the Church, which afterwards took most stringent measures to prevent any relapse. I would add that the case is somewhat different as regards slaves, and it is possible that some infusion of Aryan blood came in through this means, but the amount

¹ There were only 4,000 Jewish Cozars in all (Fraehn, "De Chazaris," 1822, p. 13). But to the contrary effect see Masudi, "Meadows of Gold," p. 407. The letters interchanged between the Khan of the Cozars and R. Hisdai of Spain, serve to show the rare intercourse of the Cozars with the rest of the Jewish world.

² M. Renan makes much of a Karaite being named Toktamiah. This might be explained by his being a Cozar. But Jews have always freely adopted local names (Zunz, "Namen der Juden"). Cf. Talm. Jer., Gittin i, 55 b.

³ Though the name *ghetto* is derived from the foundry at Venice, in which Jews were cooped up in 1510, the thing existed as early as 1090 at Salerno, if not earlier at Constantinople (Graetz, v, 87), or even in Rome and Alexandria.

would be necessarily small ; and the children, according to Jewish law, followed the *status* of the mother.

The above estimate of Jewish proselytism is substantiated by all the evidence I can gather on the subject. Thus while of the 200 doctors of the Mishna up to 200 A.D., no less than eight¹ were of alien blood (though that Semitic), of the 1,500 doctors of the Gemara, from 200 to 600 A.D., I can only find one (Mari bar Rahel)² who seems to have been descended from a proselyte. This seems to indicate the dying out of proselytism after Christianity, though the change of scene from Palestine to Babylon may have also something to do with it. Rava and Nachman, two Babylonian Rabbis of the fourth century, in discussing a certain law, dismiss the case of a proselyte as it is so seldom (Gittin, 85 a). So, too, on looking through some eight hundred inscriptions, I found two female proselytes³ in the classical ones (114 in number), but not a single one on tombstones of later date.⁴ The colossal erudition of Wolfius ("Biblioth. Hebr." II and IV) could only gather together forty-four names of proselytes during the Middle Ages, and with my utmost diligence I have only been able to add sixteen to these, five of whom died as martyrs for their new faith.⁵ As regards Moslem countries I cannot speak with such confidence. Moses de Coucy is said by Basnage to have rebuked the Jews of Spain for marrying Moorish women. But such intermarriage would only affect Sephardim, who form only 6 per cent. of the Jews of to-day, and would be for the most part with Semitic blood. The boasted tolerance of Islam⁶ only lasted down to 1040, and afterwards there was but little difference in the treatment Jews received under the Crescent and the Cross.

And even if history showed a greater infusion of Aryan blood than the above estimate would allow, the effect of this on Jewish characteristics would tend to be minimised by certain anthropological principles which have been completely overlooked by M. Renan and followers. I have already referred to the comparative infertility of mixed marriages (the Talmud

¹ Some of these were very distinguished, e.g. : Akiba, the Targumist Onkelos, R. Meir, Schemayah, and Abtalion ; three others are mentioned by Derenbourg, p. 223a. (Cf. Brüll, "Mishnahlehrer von heidnischer Abkunft," in his "Jahrbuch," ii).

² I owe this name to the erudition of my friend Mr. S. Schechter.

³ *Beruria*, re-named *Sara*, Orelli, No. 2522, and *Soteria*, who is termed *water synagogæ*, *Id.* No. 2523, both at Rome. A third given by Bernays, ii, 80, was not a full proselyte ("metnuenti").

⁴ At Venice (Berliner), Toledo (Zunz), Paris (Longperier), Amsterdam (Castro), and other places given by Wolf, Zunz, and others.

⁵ Four at Wissembourg, 1264 (Neubauer, "Rev. Etudes Juives," No. 7), and one at Augsburg the same year (Zunz, "Literaturgeschichte," p. 350).

⁶ One of Maimonides' responses is to a proselyte from Islam (Frankel, "Entwurf," p. 30).

says they only produce girls, *Nidda* 13 *b*, *Jebam.* 62 *a*), and I would now point out its consequences. Taking the most extreme case imaginable, let us suppose that as many as one-tenth of all Jews and Jewesses married outside the pale. Estimating the pure Jewish population to increase uniformly half as much again each generation of thirty years, I suppose the mixed marriage to result in only one surviving child, so that the next generation only replaces its Jewish parents. Then gradually raising the fertility as the offspring marry with Jews, but never making it equal to pure Jewish marriages, I find that in six generations, or two hundred years, the original ten per cent. has sunk to little over two.

And even this small percentage would show but little traces of its alien origin, owing to another anthropological principle to which I now proceed to call attention, I believe for the first time. On examining some cases of mixed marriages, I was struck by the uniformity with which the children resembled the Jewish side, and I was led to make special inquiry into the matter, with the following results:—Of 84 such marriages examined by me, 9 were sterile; of 35 I could obtain no definite results; 22 showed Jewish prepotency; 13 Gentile, and 5 mixed. Now when it is remembered that if mixed marriages occurred in the Middle Ages the offspring must have married again within the Jewish pale, it is hardly likely that the Gentile blood would persist throughout the ages, even if it were prepotent, and if the above rather rough results have any validity the prepotency is rather on the Jewish side, and at any rate there seems very little tendency to real intermixture (only in five families out of forty-nine).¹ Another fact pointing in the same direction is the interesting point that in families into which there has been an infusion of Jewish blood this tends to appear in a marked and intensely Jewish cast of features and expression. I know of four instances of this myself, and Mr. Galton tells me that a couple occur in the family records he has been collecting. Now as reversion is mostly towards the side of greater prepotency, this curious fact confirms our conclusion as to the superior prepotency of Jewish blood.

(2) But it will be asked, and has been asked, "How will you account for the wide divergences from the Jewish type of skull, nose, eyes, hair, &c., which are shown in the statistics on these points given above, and must indeed be a matter of common observation?" M. Renan has decided this point literally

¹ The chance of a child resembling any ancestor might perhaps be roughly expressed by the reciprocal of its figure on Mr. Galton's system, "Record," p. 3; "Nature," Sept. 6th, 1883. Thus the chance of my resembling my maternal great-grandfather is $\frac{1}{16}$. Cf., too, Galton, "Her. Gen.," p. 327 n.

ex cathedra: seated in his chair at the Bibliothèque Nationale, he has observed the Jewish *savants* who have applied for his aid, and concluded that there are several types of Jews which are absolutely irreducible to one another ("Le Judaïsme," &c., p. 25). But the question of types is a question of averages, and you cannot so easily decide upon the non-existence of a type by pointing to a few divergences from it. An organism is not a manufactured article turned out by machinery, but may modify itself and be modified by the environment, introducing a principle of variability which causes the type to develop. An organic type therefore exists not where there is no variation, but where the variations follow the law of error, and where the modulus of variation is tolerably constant. This is in the main the case with most of the anthropological measurements I have laid before the meeting, and it follows that the variations, though they may be due to intermixture, may also be merely normal divergences from the standard.

It seems hardest to accept this result with regard to red hair, which we have seen to be exceptionally prevalent among Jews. Yet, as a matter of fact, red hair seems to be only a natural complement to black, so that for anthropological purposes we might even term red "light black." The colour of the hair is determined by the presence and amount of two pigments: when the darker is absent from any physiological cause red hair is the consequence, just as when both are absent albinism appears (Topinard, "Elements d'Anthropologie," 1885, p. 323). Now just as albinos occur among all races, including negroes, so does red hair. Eusebius declared that Adam was rufous, not only from the etymology of the name, but because red-haired men occurred among all the races of mankind (Topinard, *loc. cit.*). That "erythrusm" among Jews is not due to intermixture, but probably to defective nutrition, is shown in the first place by its occurring among Jews of Africa and the East. It has been observed in Algiers, Tunis, Bosnia, Constantinople, Smyrna, Syria, Persia, and Bokhara.¹ Secondly, from my analysis of Dr. Beddoe's results, it will be observed that red hair occurs among Sephardim to a greater extent than among Ashkenazim, and it has never been contended that the Sephardim have mixed much with any race markedly rufous.² And, thirdly, when it does occur among Ashkenazim of North Europe, it is found more among Jews than in

¹ Dr. Beddoe has paid particular attention to this point; see his paper previously cited, pp. 12-19 of the reprint and table at end. Andree, "Zur Volks," p. 35, repeats most of this, but is mistaken in saying that rufous Jews have been observed at Cochin. I have seen somewhere that the red-haired Jews of Palestine claim to be Benjamites.

² A certain amount of erythrusm was, however, introduced into Spain by the Goths (*cf.* Beddoe, *loc. cit.*, p. 24).

the indigenous population, whereas if it were due to intermixture we should expect to find the amount of erythrism among Jews intermediate between that of the natives among whom they dwell and the supposed original black hair of the Semites. Indeed, but for the abundant presence of red hair among Scotchmen it might be more open to explain the origin of red hair among Europeans as due to an infusion of Jewish blood than to account for it among Jews by assuming intermixture with Aryans.

The argument from red hair being thus dismissed with costs, the existence of blue eyes among Jews in relatively large proportions need not be regarded as overwhelming proof of intermixture. As is well known, all eyes are blue at birth, *i.e.*, we see through to the back of the baby's iris, and if no pigment cells are deposited in the iris the eyes remain blue to the end of life (Topinard, *loc. cit.*). Thus blue eyes, as well as red hair, are a kind of minor albinism, and may result from defective nutrition or other physiological causes like red hair. That this is probably the real cause of its occurrence among Jews is confirmed by the fact that we find blue eyes among Asiatic as well as European Jews (*cf.* Beddoe, *loc. cit.*).

It may be convenient that I should here add what little evidence I have been able to collect as to the appearance of Jews in the past. It is a question whether Esau (Edom) was regarded as having red hair (Gen. xxv, 25), because that colour was frequent among the Idumæans. Dr. Beddoe suggests that red hair among Jews may have been due to intermixture with Idumæans after they became proselytes; but the existence of red hair among them, their proselytism,¹ and their intermarrying with Jews are all more or less conjectural. In the regulations about leprosy (Lev. xiii) it seems to be implied that the hair was black, or at any rate dark. The Shunamite says, "I am black [swarthy], . . . for the sun has browned me" (Cant. i, 5), but on the other hand speaks of the "raven locks" of her beloved (*ibid.*, v, 11). If we could trust to the etymologies of proper names the five persons bearing the names Harim and Harumaph in the Bible had flat noses. The first definite information I can find is contained in a saying of a Mishnic Rabbi, R. Ishmael (about 120 A.D.), who says (Neg. ii, 1), "The sons of Israel are like boxwood, neither black nor white, but between the two," *i.e.*, of olive complexion. Both Mishna and Gemara seem to use "black" (*shachar*, *vide* Buxtorf, *sub voce*, col. 2372) as synonymous both with "hair" and with "youth."² The

¹ Derenbourg ("Essai," p. 227) says that the proselytism of the Idumæans was more political than religious.

² It is to be remarked, however, that the chief passage (Pirke Aboth iii, 12) on which this identification is based is not of certain interpretation. See Taylor, p. 66, Geiger ("Nachg. Schr.," iv, p. 33), and Strack *in locum*.

Targum or Chaldaic paraphrase on 1 Sam. xvi, 12, makes David "red-haired" instead of "ruddy," and the mistranslation has passed into Luther's version. This shows at least that the Jews of the time when the Targum was written (about 600 A.D.) were not averse to regarding the typical Jewish king as rufous. The light hair given to the Christ in early Art,¹ the traditional red hair attributed to Judas Iscariot, as well as the golden locks of Mary Magdalene, require further investigation. Later on I find Jehuda Halevi (c. 1140 A.D.) speaking of the golden hair of his beloved,² a Spanish Jew, Roven Salomo, 1349 A.D., with light brown hair,³ and Rembrandt's Rabbi in the National Gallery has a red beard. All these indications serve to show that red hair at least is no late importation into Jewish anthropology.⁴ Evidence about blue eyes is more difficult to obtain, as it is still a doubtful point among scholars whether either Bible or Talmud has any word to express blue.

Altogether, then, the two chief arguments hitherto urged to prove intermixture—which may be roughly summarised as proselytism and red hair—cannot be said to be decisive, while there are other more positive arguments tending to show the comparative purity of the Jewish race, and to these I now turn.

I. The first and perhaps chief of these is the existence of a class of Jews who are not permitted by Jewish law to marry even full proselytes. These are the priests, or *Cohanim*, the Beni Aaron or sons of Aaron. We have already seen that at the time of the Maccabees, Jews were addressed in the Psalms under three appellatives—Israelites, Aaronites, and Proselytes. The sons of Aaron could only intermarry with the daughters of Aaron or of Israel. The discussion about the comparative purity of Babylon and the surrounding districts which gave rise to the saying, "Babylon is sound, Mesene dead, Media ill, and Elam on its last legs" (Kidd. 71 a), was probably concerned with the purity of Cohanite marriages, for which any perceptible amount of "paste" or intermixture was considered as objectionable.⁵ The

¹ See "Dict. Christ. Antiq." art. "Christ, Early Representations of," and authorities there quoted.

² Geiger, "Divan," p. 123. The poet uses, I regret to observe, the same words as are used in the Bible to represent the discoloration of the hair on the leprous spot (Lev. xiii, 30).

³ Figured in "Rev. d. Et. Juives," No. 12.

⁴ It is worth while remarking that the Cozars, according to Ibn Foslan, had black hair (cf. Lagneau, "Denombrement," p. 49, note).

⁵ Upon the difficult question of *Issah*, or "paste," there are two papers in Graetz, "Monatstaf," one by Graetz himself, "Illegitime Mischehen in Judenthe," 1879, pp. 481-508, and one by F. Rosenthal, "Ueber Issah," 1881, pp. 38-43, 118-123, 207-217. Cf., too, Graetz "Das Königreich Mesene," pp. 31-33. I fancy that the custom of consanguineous marriages may be connected with the desire to preserve purity of descent; cf. R. Meir's recommendation (Kidd. 71 a, "Monats," 1879, p. 507), and Tobit, who marries of his own kindred (i, 9).

saying and similar ones cannot be pressed to prove any wide admixture, and only serve to show how carefully the purity of Cohanite marriages was preserved, and the notice taken of any deviations from endogamy. It will be of interest to ascertain the number of these Cohanim who are themselves pure, and must have set an example of exclusiveness to their fellow-Jews. In the return under Nehemiah, the four families of priests numbered 4,289, out of 49,942 (Neh. vii, 39-42, 66, 67). In two lists of martyrs killed at Nurnberg in the years 1298 and 1349, the Cohanim number 91 out of 1,300, almost exactly the same proportion as in Ezra's time, though one may expect to find the Cohanim more ready to suffer martyrdom than other Jews.¹ In Jewish ritual it is customary that the first "called up" to the reading of the Law should be a Cohen, and there are only five on ordinary days and eight on Sabbaths and festivals,² thus indicating that a large supply of Cohanim was regarded as usual. Among the two hundred inscriptions of the Venice "House of Life" or burial ground collected by Dr. Berliner ("Heb. Grab-schriften," 1881), there are thirteen Cohens (6·5 per cent.), though here again it is probable that a greater proportion of these would be honoured with tombstones. The descendants of such Cohanim live and flourish at the present day, but it is impossible to determine their number, as their civil surname may not be Cohen. Thus Dr. N. M. Adler, the present Chief Rabbi of England, is a Cohen, though it is not necessary for a Jew to be a Cohen in order to be a minister. In lists of 4,720 English Jews I found the Cohens to form 3 per cent., while in a Continental list of 4,600 they were but 2·3 (my "Studies," p. 4). The latter is probably somewhat misleading,³ as in a list of 335 Jewish celebrities in all European lands, culled from dictionaries of contemporary biography, the Cohens number eleven, or very nearly 4 per cent., while I know of at least five of the remainder who might call themselves Cohen. Altogether I am inclined to think that there are about 5 per cent. of Cohanim among Jews, and these cannot have had any direct mixture with the outer world.⁴

But though they may never marry a proselyte, they may

¹ I calculate these from the lists given by Dr. Neubauer, "Memorbuch de Mayence," *Revue*, No. 7, p. 10; and the Rev. W. Lowe, "Memorbuch of Nurnberg," 1880.

² This and the priestly benediction are the only two functions now performed by Cohanim; it would be interesting to learn the origin of the position of the fingers in the latter function, which are spread so as to leave a gap between the first and the last two.

³ Lippe's "Biblog. Lexicon" contains a large proportion of names of ministers, and small congregations object to a Cohen as a minister, as he must not approach a dead body (*Lev. xxi, 1*).

⁴ There are said to be less Cohanim among Sephardim.

marry the daughters of proselytes, and thus introduce alien blood. R. Jose was for allowing them even to marry proselytes, while R. Jehuda declared against their marriage with any child of a proselyte: the law, however, went with the opinion of R. Eleasar ben Jacob in the early part of the second century, who permitted marriage between a priest and a woman one of whose parents had been a proselyte (Mishna, Kidd. iv, 7). Owing to this decision, later authorities doubted whether there were any true Cohanim, *e.g.*, Isaac ben Shesheth, of the thirteenth century, while R. Samuel b. Modena, of the sixteenth, even allowed a Cohen to transgress the Law on this ground (Löw, "Lebensalter," p. 114, and notes p. 391). There is also an amusing tradition told in the Talmud, aspersing the purity of Cohanite descent. It is said of Pashur ben Immer (in whom two of the four Cohanite branches appear to be conjoined), that he had four hundred female slaves, and that if you find an impudent Cohen nowadays, he is certainly descended from Pashur ben Immer (Kidd. 70, *b.*)¹ I may add that even at the present day Cohens have the reputation of being hotter-tempered than other Jews. All these indications may modify any claim for absolute purity among Cohanim; and the fact that they do not differ perceptibly from other Jews may serve as an argument either for the general purity of the race, or, on the other hand, for the mixed origin of the Cohens, which would be very difficult to prove to any large extent.

II. Another point on which I would lay stress, if the suggestion I make is borne out by facts, is with regard to the comparatively small variation of type among Jewesses as compared with Jews. I seem to observe that Jewesses have more uniformly what we term the Jewish face than Jews have. It is a universal law of animal life that, owing to sexual selection and other causes, the males of a species vary considerably more than the females. And, conversely, where we find the females varying less than the males we may conjecture that we have a case of true species. Even more in Jewesses than in Jews, we can see that cast of face in which the racial so dominates the individual that whereas of other countenances we say, "That is a kind, a sad, a cruel, or a tender face," of this our first thought is, "That is a Jewish face." That the difference should be almost innately perceived by Jews who have for nearly two thousand years associated all that is kindly with this type would be natural. But the difference is almost as readily discerned by Gentiles, and even the negroes of Surinam, when they see a European and a Jew approach, do not say, "Here are two whites," but "Here is a white and a Jew" (Duttenhofer ap. Andree, "Volks," p. 38).

¹ I owe this reference to the kindness of my friend Mr. Schechter.

I lay stress upon this point of expression because it is after all the chief external trait that can be fixed upon as typically Jewish. We have the evidence of the monuments for its persistence through the ages, and the scientific evidence of its typical character in the "composites" produced by Mr. Galton's process, and given with this paper. Mr. Galton agrees with me that he has been more successful in producing definite types with Jewish boys than with any other of his subjects (cf. the plate prefixed to his "Inquiries into Human Faculty"). It must be allowed, however, that there is great force in the argument which would attribute the Jewish expression to the influence of isolation, so that we might define it as *Semitic features with ghetto expression*. But against this reasoning may be urged the early appearance of the Jewish type in the Assyrian monuments, and further, the fact of its appearing among the results of mixed marriages, where it must be racial. I have already pointed out what I consider to be the part of the Jewish expression due to isolation—the intensity of the gaze shown so well in the adult "composite" D, a fitting expression of a severe struggle for existence.

The earlier period at which "the custom of woman" (Gen. xxxi, 35) appears among Jewesses (*supra*, p. xvii, note) is another trait which, if substantiated by wider induction, must be regarded as distinctly racial. If Darwin's explanation of its origin ("Descent," 1st edit., I, p. 212) be correct, it must have preserved its periodicity for an incalculable time, and it may be surmised that any other temporal relation, such as the age of its appearance, would be equally persistent. If it appears among Jewesses of St. Petersburg at the same early age as among Southern Asiatics, the Eastern origin of the former may be considered as well established.¹ But I fear that I am here falling into the same error that has misled so many inquirers into Jewish biostatics: I may be trusting to statistics derived from a few hundred subjects to decide on a question affecting several millions. I will therefore content myself with pointing out the importance of the subject and the need of further investigations.²

III. And, finally, in dealing with the question of the racial purity of Jews, as in the main we must deal with it, historically,

¹ On the other hand, the Talmud fixes the age of puberty for girls at the beginning of the thirteenth year, i.e., when twelve years old (Nidda 46 a; Löw, "Lebensalter," p. 142); this seems earlier than at present.

² There is probably something distinctive about the gait of Jewish women. Here in England, at any rate, most Jewesses can be distinguished at once by their swaying walk, due to their walking from the hip, not from the knee. I am uncertain whether this distinction is merely a Continental habit imported into England, or whether it can be traced back to the times of Isaiah (iii, 16).

one has to take into account the fact that it takes two to make a mixed marriage, and that up to the present century there has been a repulsion, not perhaps wholly on one side, between Jews and Gentiles, which would scarcely allow of any wide communion such as would be implied in extensive intermarriage.¹ The ancient and mediæval States were Churches as well as States, and could not allow those to be citizens who could not be of the State religion. The isolation into which Jews were thus cast led, in the course of time, to a feeling of combined contempt and terror about them among the populace. The folklore of Europe regarded the Jews as something infra-human, and it would require an almost impossible amount of large toleration for a Christian maiden of the Middle Ages to regard union with a Jew as anything other than unnatural. The ancients had something of this feeling, and it was trebly intensified when the Church rose into power, regarding the Jews as the arch-heretics, the Deicides, the incarnate anti-Christ. Even at the present day, with all its toleration or indifference, much of this feeling remains, as sad experience has shown in Germany, Austria, Russia, and Roumania, and while it lasts no commingling of the opposing parties can take place on a large scale. At the present day the only country where mixed marriages occur in appreciable numbers is Prussia, where the majority of the offspring are brought up as Christians ("Studies in Jewish Statistics," p. 54). Taking all the Jews of the world it may be doubted if one mixed marriage occurs to five hundred pure Jewish marriages. And if this is so under the most fortunate circumstances Jews have ever known, intermarriage is not likely to have been more frequent in times of greater mutual repulsion. We might take the condition of affairs in Algeria as answering to the most favourable relations of Jews and Christians in the Middle Ages. Yet what do we find there? During nearly half a century (1830-77) in an average population of 25,000 Jews there have only been thirty mixed marriages altogether—not one a year (Ricoux, "La Demographie de l'Algérie," 1880, p. 71).

For these reasons I am inclined to support the long-standing belief in the substantial purity of the Jewish race, and to hold that the vast majority of contemporary Jews are the lineal descendants of the Diaspora of the Roman Empire. The question is one the main interest of which is anthropological, and its

¹ Even in the most isolated "colonies" of Jews, strenuous efforts seem to have been made to prevent fusion with the surrounding races. The white Jews of Cochin still preserve their identity from the black Jews. The Jews of China, the most isolated of all, seemed to have stood out for a long period. Even in 1851, two *Tsungs* (or 100 families) of the eight of which they were composed did not marry the daughters of the "heathen Chinee" (Finn, "Orphan Colony," p. 23).

complex difficulties can only hope for an ultimate solution from the progress of the Science of Man. I have therefore been glad of an opportunity of bringing it before the Anthropological Institute.

Explanation of Plates I and II.¹

The plates I and II accompanying this paper (first given in the *Photographic News* of April 17th and 24th, 1885, with articles by Mr. Galton and myself, the former explaining the process fully) give eight composites of Jewish lads on the left hand sides and opposite to the top and the bottom composite, the five components of which in each case they are composed. The middle composite on the right hand side is a co-composite of the other two, and thus practically contains the whole of the ten components. The composite on the extreme left is in each case that of five older lads who are not shown. The composites have capital letters attached to them, the components smaller letters corresponding to the former. Thus A is the composite produced by taking the photographs a_1, a_2, a_3, a_4 , and a_5 accurately one on top of the other on the same sensitized plate. The discrepant features blur out while the common characteristics intensify one another and produce a *type* of all the components. B represents in the same way b_1 to b_5 , and C is then formed by superimposing A on B on the same negative.² D is a composite produced like A from five photographs of older youths which could not be given for want of space. Similar explanations apply to the composite E to H.

Of the fidelity with which they pourtray the Jewish expression there can be no doubt. Each of the eight composites shown might be taken as the portrait of a Jewish lad quite as readily as any of the components. In some cases, indeed, *e.g.*, f, the portraits are less Jewish than the composites. The individuality and, I may perhaps even add, the beauty of these composites are very striking. It is difficult, even for those who know the process, to grasp the fact that the composite E is anything but the portrait of an individual; and the same may be said of D, the composite of five older lads, whose portraits are not shown. A, again, the composite of the five a 's, reminds me of several Jewish youngsters of my acquaintance, and might be taken for a slightly blurred photograph of any of them. This is the more curious since A does not resemble very closely any one of its components. These facts are something more than curious; they carry with them conclusions of scientific importance. If these Jewish lads, selected almost at random, and with parents

¹ The Council is indebted for these plates to the kindness of Mr. Thomas Bolas, of the *Photographic News*.

² C was afterwards "stiffened" by the addition of three other photographs.

from opposite parts of Europe, yield so markedly individual a type, it can only be because there actually exists a definite and well-defined organic type of modern Jews. Photographic science thus seems to confirm the conclusion I have drawn from history, that there has been scarcely any admixture of alien blood amongst the Jews since their dispersion.

These composites, there can be no doubt, give the Jewish expression. What do they teach us as to the elements which go to form it? The popular idea of a Jewish face is, that it has a long nose. But the full-face composites A to D have decidedly the Jewish expression, though the shape of the nose does not appear; and further, in composite H, as well as in co-composite G, which represents ten Jewish boys "rolled into one," the shape of the nose is markedly blurred, showing that there is no uniformity in this respect. The popular impression seems, then, to be disproved by these composites. Yet it contains a part of the truth, as do most of those rough averages which we term impressions. The nose does contribute much towards producing the Jewish expression, but it is not so much the shape of its profile as the accentuation and flexibility of the *nostrils*. This is specially marked in the composite D. Take a narrow strip of paper and place it over the nose in this composite, and much, though not all, of the Jewish expression disappears. And in the profile *components* it will be observed that every face has the curve of the nostril more distinctly marked than would be the case in the ordinary Teutonic face, for example.

A curious experiment illustrates this importance of the nostril towards making the Jewish expression. Artists tell us that the best way to make a caricature of the Jewish nose is to write a figure 6 with a long tail (fig. 1); now remove the turn of the

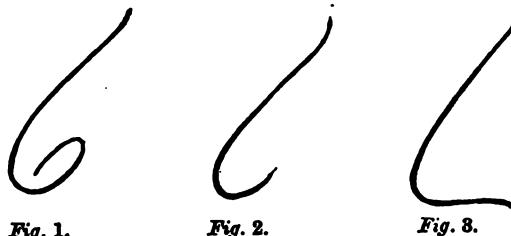


Fig. 1.

Fig. 2.

Fig. 3.

twist as in fig. 2, and much of the Jewishness disappears; and it vanishes entirely when we draw the continuation horizontally as in fig. 3. We may conclude, then, as regards the Jewish nose, that it is more the nostril than the nose itself which goes to form the characteristic Jewish expression.

But it is not alone this "nostrility" which makes a Jewish

face so easily recognizable. Cover up every part of composite A but the eyes, and yet I fancy any one familiar with Jews would say, "Those are Jewish eyes." I am less able to analyse this effect than in the case of the nose. The fulness of the upper lid, and the protuberance of the lower, may be remarked, as well as the scantiness of the eyebrows towards the outer edges. The size, brilliance, and darkness of the iris are also well marked. Many persons have remarked to me that Jewish eyes seem set closer together, and this property is seen in composites A and D giving much of its expression to the latter. I fail to see any of the cold calculation which Mr. Galton noticed in the boys at the school, at any rate in the composites A, B, and C. There is something more like the dreamer and thinker than the merchant in A. In fact, on my showing this to an eminent painter of my acquaintance, he exclaimed, "I imagine that is how Spinoza looked when a lad," a piece of artistic insight which is remarkably confirmed by the portraits of the philosopher, though the artist had never seen one. The cold and somewhat hard look in composite D, however, is more confirmatory of Mr. Galton's impression. It is noteworthy that this is seen in a composite of young fellows between seventeen and twenty, who have had to fight a hard battle of life even by that early age.

There remain the forehead, mouth, and chin to add their quota to the Jewish expression. The predominating characteristic of the forehead is breadth, and perhaps the thick and dark hair encircling it has something to contribute to the Jewishness of the face. The thickness of the lips, and especially a characteristic pout of the lower one, come out markedly in components and composites, both full face and profile. One may observe, too, the dimples (if one may use the term) which mark the termination of the mouth, and are seen in an exaggerated form in a_1 . Finally, the heavy chin, especially marked in the profile composites, confirms the popular association of this feature with the quality of perseverance, so ingrained in the Jewish nature.

We learn, then, from these composites that the Jewish expression is considerably more complicated than is ordinarily thought. Judged by these composites the Jewish face has accentuated flexible nostrils, largish mouth, with ends well marked, and pouting under-lip, heavy chin, broad forehead, with prominent superciliary ridges scantily covered with hair towards the outer extremities, and large brilliant dark eyes, set closely together, with heavy upper and protuberant lower lid, having a thoughtful expression in youth, transformed into a keen and penetrating gaze by manhood.

But words fail one most grievously in trying to split up into its elements that most living of all things, human expression;

and Mr Galton's composites say in a glance more than the most skilful physiognomist could express in many pages. "The best definition," said the old logicians, "is pointing with the finger" (*demonstratio optima definitio*); and the composites here given will doubtless form for a long time to come the best available definition of the Jewish expression and the Jewish type.

DISCUSSION.

The Rev. Dr. HERMANN ADLER (Delegate Chief Rabbi) congratulated the President on having chosen a subject of such profound interest to the student of anthropology. He agreed with the view propounded by Mr. Jacobs in his exhaustive paper, that on the whole there had not been any large foreign admixture with the Jewish race. As a theme for further inquiry, he drew attention to the copies in Dr. Wright's "Empire of the Hittites" of the representations discovered near Carchemish of the ancient inhabitants of that country. Their features bore an extraordinary resemblance to the inferior Hebraic type, with low forehead, hooked nose, and thick lips. If the hypothesis of Professor Sayce and Dr. Wright were accepted as correct, might the existence of this type, which argued kinship with the Mongolian race, and which differed so materially from the characteristic features of the Semitic race—the expanded forehead and symmetrical lineaments—be traced to intermarriage with the Hittites who are represented in the Bible as descended from Ham?¹ The dark and the blonde type, the speaker believed, should be regarded as original, dating from Bible times and described respectively in Canticles v, 11, and 2 Samuel xvi, 12. That the existence of the blonde type was not due to intermarriage might be proved by the fact that it was to be found among the Jews of North Africa, Syria, Arabia, and Persia, where, owing to the prevalence of fanaticism, mixed marriages had rarely, if ever, taken place. Goethe, a man of science as well as a poet, had pithily summed up the main anthropological characteristic of the Hebrew race in the words: "Es ist das beharrlichste Volk der Erde. Es ist, es war, es wird sein."

Dr. BEHREND observed that M. Littré had well said that all springs of human conduct arose from two instincts, that of self-preservation, and the reproductive instinct for the preservation of the race. The rightful cultivation of these two instincts led to the primary desire of all humanity—happiness, and the chief element in human happiness was health. Health, both of body and

¹ *Note by Mr. Jacobs.*—These Jewish-looking "Hittites" were probably the Semitic vassals of the genuine Hittites. Mr. T. Tyler has pointed out to me at the British Museum two types on the monuments, one of Mongolian features and a kind of Chinese tao, the other of the ordinary Semitic type. The latter he conjectures to be the vassals of the former, and thus their appearance is simply another example of the identity of the Jewish and the type.

mind, depended mainly upon conduct, not only of the individual, but also from heredity. Therefore we should expect that as conduct (and through conduct, health; and through health, happiness) was the object of religion, a code of religion should lay down laws, which would be a guide of conduct, and thereby conduce to health and happiness. These primary instincts, that of self-preservation and the reproductive instinct, were mainly regulated in the Jewish code by laws concerning diet, circumcision, and the sexual relations. The speaker had shown elsewhere at length (in a series of papers "On the Communicability to Man of the Diseases from Animals used as Food") that the Hebraic dietary laws preserved from the transmission of such diseases, and especially from the ravages of tuberculosis, which in its various forms was accountable for at least one-fifth of the entire mortality in this country. The sexual relations were regulated in the Hebrew code by laws which aimed at conserving the highest attainable degree of virility, by restraining undue indulgence, and ensuring procreation only at a specially healthy period. We need hardly pause to dwell on the enormous advantages such a start in the battle of life must give towards the "survival of the fittest."

The special biostatic privileges of Jews might be summed up in the proved facts that they married less, had fewer births, died less (that is, lived longer), increased at a greater rate, and had fewer stillborn and illegitimate children than any other race. It was quite unnecessary to repeat the statistics upon these points: they had been given over and over again, as by Hoffmann, Kolb, Bergmann, Legoyt, Bernouilli, Lagneau, Loeb, and many others; but it was interesting, and to the Jews vitally instructive, to note that in proportion as they mixed with other races—either of their own accord or by the spread of social tolerance—they lost these biostatic privileges, and the differences became effaced. Thus M. de Bergmann. ("Beiträge zur Geschichte der Bevölkerung in Deutschland") showed that the relation of the sexes among the Jews in Posen had of late become much modified: that while from 1819 to 1864 it was as 111.94 boys to 100 girls, it fell to 106.39 to 100 from 1864 to 1873; similarly, the proportion of illegitimate births among them had increased, showing a relaxation in their adherence to the Mosaic code. In every one of the biostatic privileges they enjoyed, the penalty had to be paid for laxity of observances, and either in their own persons or in their descendants those who transgressed had to submit to the inexorable law of "being cut off from their own people," as far as was concerned in their share of the physical advantages of their race.

Mr. F. D. MOCATTA remarked that in addition to the two greater divisions of the Jewish race, Sephardim (Spanish) and Ashkenazim (German), not to mention the Italian Jews, there were various other families of Jews, such as those of the interior of Morocco, speaking Arabic, and not Spanish, those of Persia and of Yemen, and others. Besides these were large numbers of Jews in various countries, who might be considered not to be of the seed of

Abraham, or only to be to a greater or lesser degree crossed with it. Such were the Beni-Israel of Bombay, those of Foo-Choo-Foo (now nearly obliterated), the Riff Jews of the north of Morocco (an armed warlike set, loosely adhering to Judaism, but differing in physique and habit from other Jews), the nearly black and crispy Malabar Jews, &c. Also the Jews of South-East Russia in Europe who speak Russian, and are a well-developed, hardy, and generally ruddy race, are probably a different family from those of Poland and Central Russia, who still speak a dialect of German, their ancestors having been driven out of Germany at the period of the Crusades. This family might possibly represent, as the Karaites of the Crimea were often supposed to do, the descendants of the Khozars, a tribe on the Caspian, who about the seventh century founded a state and maintained it for the best part of two centuries, adopting the Jewish religion. All these, so to speak, outlying families of Jews might be regarded as descendants of proselytes, but as they had blended but very little with the general mass of the Jews, they did not much affect the subject then under consideration. In Biblical times the Jews frequently made matrimonial alliance with the surrounding populations, and it was a constant theme of the reproach of prophets and reformers, notably of Ezra and Nehemiah. Later on, at the time of the conquest of Titus, and when Christianity was only dawning on the Latin world, many Jews were carried to Rome, the bulk being the common people, who were put to labour on public works, and often devoured at gladiatorial shows; but some of whom being scholars and persons of refinement were admitted into Roman society, and by the purity of their doctrine won over to their philosophy and religion many of the higher classes, notably women, who were becoming tired of the superstitions and worldliness into which the pagan religions had degenerated. This probably led to alliances, and such is M. Renan's opinion. The Jews also, ever prone to adopt the habits and manners of surrounding nations, became lax, Romanised and Hellenised their names, as was evidenced in the Jewish catacombs at Rome, and probably contracted marriages with the people around them. All these sources might have led to an admixture of non-Jewish blood, the extent of such admixture (the alliances being at all times exceptional rather than general, and having become rarer with the persecutions which set in in the earlier ages of the Christian Church) was not likely to have essentially modified either the type or the physical or moral characteristics of the Jewish race, which might therefore be regarded for all practical purposes as pure. This was all the more probable since a large number of the issues of such mixed alliances naturally fell back to the dominant religions of the various times and countries, and ceased to have anything to do with Judaism. The speaker said he had not alluded to alliances made between Jews and Oriental peoples, Mohammedans, &c., in earlier times, firstly because it would be difficult to prove their frequency or the contrary, and secondly, because these peoples, being for the most part Semitic themselves, the changes thus induced would have been far less accentuated.

Sir JOSEPH FAYER had no criticisms to make on the erudite papers which had been read that evening, but would ask one or two questions, first remarking that he had known Jews in Calcutta where one member of the family had light hair and grey eyes, another dark hair and complexion. It struck him that the Armenians presented those peculiar characteristics of physiognomy which were usually attributed to the Jew. Was this not simply a question of race, both being Semitic, and should not the so-called Jewish physiognomy rather be called Semitic than be regarded as the special attribute of the Hebrew as distinct from other Semitic races such as the Armenian? The speaker would ask the learned author of the second paper (Mr. Jacobs) if he could give any information as to the relation of the Afghans to the Jews? They undoubtedly had the physiognomy strongly marked,—it was often said they were descendants of the lost tribes, and there was a tribe among them calling themselves Beni-Israel. What was known and accepted among erudite Jews as to the origin of the Afghans? Again, what was the origin of the race of Black Jews on the Malabar coast? Were these not a mixed race, and were they not the result of admixture with the Teluigan races of Southern India? Pure as the Jewish race is, it would seem that it must be recognised that evidences of such admixture with other races did exist, and it would also seem that they had taken more or less an impression from their surroundings and from the character of the races among which they had settled.

Mr. LUCIEN WOLF did not agree with Mr. Jacobs' view of the physiological characteristics of Jews. Mr. Jacobs practically denied the existence of these characteristics, whereas the speaker felt inclined not only to assert their existence, but to assert that they were as well defined as to form real race distinctions. This view could be proved by statistics, and figures could also be given to prove the immunity of Jews from phthisis, which Mr. Jacobs contested. The purity of the race could not be demonstrated by anthropological measurements, for, physically, Jews varied enormously. It was different with their vital characteristics, and while we found that these were maintained at a high average we might rest assured that the race was being conserved. The evidence brought forward by Dr. Neubauer in favour of his view that the Jewish race had not kept itself pure told against the proposition it was intended to support when it was tested by other evidence. Thus it might be asked how was it that, notwithstanding these large accessions to Judaism, the race had not increased, and that in spite of these large infusions of alien blood, so important a vital characteristic as its high reproductive power has not become modified. It must be obvious that had the remarkable multiplying power of the Jews been left unchecked they must have increased far beyond their present numbers, and if they could receive accessions from other races without diminishing this power, then by this time they ought to have peopled the world. The conclusion must be then that the mixed marriages referred to had

not affected the purity of the race. By their tendency to sterility they have periodically carried off the perpetually growing fringe of Judaism, leaving always a pure nucleus to repropagate itself. Thus by bringing to light the fact that mixed marriages were generally sterile, the evidence cited by Dr. Neubauer, instead of telling against the purity of the Jewish race, revealed the most powerful argument in its favour. Nor was this theory of sterility a theory only. The speaker had investigated a large number of cases of mixed marriages—not quite so many as Mr. Jacobs—and in every single case he had found, if not absolute sterility, at least a falling off in the vital power of the offspring, placing them far below the average obtaining in the Jewish community. This falling off was only postponed sterility, as he had had occasion to prove himself by investigating the history through several generations of a few mixed marriages.

Mr. MARCUS N. ADLER said that in his capacity as Actuary he had had opportunities of examining various statistics bearing on the subject under discussion. He agreed with Mr. Jacobs' remark that in the case of Jews mixed marriages were not so productive as ordinary marriages. On this point Herr von Fircks had published some interesting statistics in the official Journal of the Statistical Bureau of Prussia, and a good deal of weight must be attached to these figures, inasmuch as the entire population of Prussia is compared with the Jewish population, which exceeds 300,000. It would appear, dealing with the averages from the year 1875 to the year 1881, that out of 100 marriages—

Where both parents were Protestants there were 430 children.

”	”	”	Roman Catholics	”	”	520	”
”	”	”	Jews	”	”	441	”
”	”	”	one of the parents was a Protestant	”	”	325	”
”	”	”	and the other Roman Catholic	”	”	325	”
”	”	”	one of the parents was Christian and	”	”	165	”
”	”	”	the other Jewish	”	”	165	”
”	”	”	the father was a Jew and the mother	”	”	131	”
”	”	”	a Protestant	”	”	131	”

If we bore in mind that out of the number born not one-half attained marriageable age, and a still less number actually married, it followed that the descendants of mixed marriages were comparatively few, and this consideration became an important element in the argument as to the comparative purity of the Jewish race at the present day. With regard to insanity, there was little doubt but that it was more prevalent amongst Jews than among the Christian population. M. Legoyt published some statistics which would show that while one person was insane out of every 1,200 Protestants, and one person insane out of every 1,000 Roman Catholics, amongst the Jews one person was insane out of every 760. It would not do to ascribe this to marriages amongst near relations being rather frequent amongst Jews, for if so, why should there be a larger number of insane amongst Roman Catholics than amongst Protestants, seeing

that amongst the Roman Catholics marriages between cousins are prohibited? Moreover, Mr. George Darwin, in an interesting article which appeared in the *Fortnightly Review* in 1875, showed that insanity is not more prevalent in the offspring of marriages of cousins than in the offspring of other marriages. It was, however, found that persons living in towns were more subject to insanity than those living in the open country, and since the Jews mostly inhabit towns, the speaker was disposed to ascribe the more numerous cases of insanity among the Jews to the fact of their living among densely populated districts, also to their being more addicted to head work than to manual labour, and to many of them being of rather a nervous temperament.

Dr. ASHER believed that the figures supplied by Mr. Joseph Jacobs as to the prevalence of phthisis among Jews were entirely fallacious. Jews had an extraordinary power of resistance to phthisis, but when exposed for sufficient time to all those surroundings which lower vitality beyond the limits which their constitutions could bear, they necessarily succumb, but they endured and resisted far far beyond what would kill those not of their race. From an experience of several years as surgeon to the Jewish Board of Guardians, the speaker was enabled to say that phthisis among English Jews was almost unknown: the vast majority of those who died from tuberculosis were Russians or Poles, who in their own countries had been herded together under the most insanitary conditions. It was no more fair to accuse Jews of special liability to tuberculosis on account of those deaths than it would be to say that Brompton is a district specially liable to that disease because there were so many deaths therefrom in the hospitals with which the district abounded. Figures and facts substantiating the above would be found in the report for 1859 of Dr. Septimus Gibbon, Medical Officer of Health.

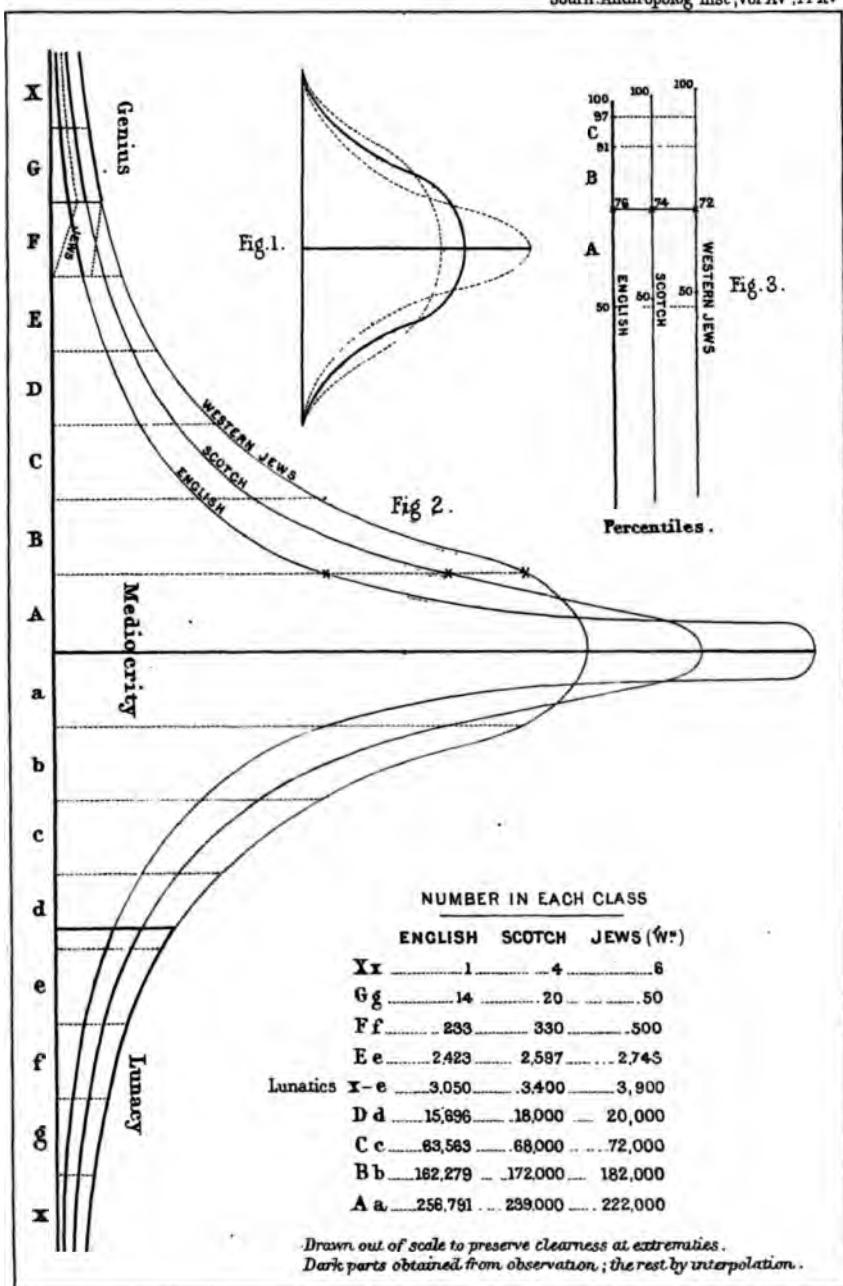
Mr. JOSEPH JACOBS, in reply, expressed his regret at the absence of Dr. Neubauer, which had deprived the meeting of his valuable criticism, though it had doubtless freed himself from a formidable opponent. He was under the impression that the translation "red-haired" in 1 Sam. xvi, 12, was mistaken, and that the word *edmoni* simply implied "ruddy," which might apply to a dark as to a fair complexion. He had only referred to the mistranslation of the Targum as showing that Jews of the sixth century A.D. saw no objection to a Jewish king being red-haired. There was no special Jewish theory of the origin of the Afghans. They shared with many other races of uncertain origin the doubtful honour of being connected with the Ten Tribes about whom so many wild theories had been broached. This was possible; or their Semitic appearance might be due to descent from the tribes of North Arabia or Mesopotamia. The Black Jews of Malabar were known to be proselytes of the White Jews who had arrived there. Mr. Wolf's remarks seemed to him to overlook the great complexity of the problems dealing with the origin of the biostatic and physical characteristics of the Jews. These might be due either to common

race or to common customs, and he was inclined to attribute them mainly to the latter. He had not denied their existence, indeed he hoped he had exhibited them with a larger body of evidence than had hitherto been collected. But he doubted whether they could be adduced to prove the purity of the Jewish race, which was the immediate question before them. There was no evidence to prove that the Jews in mediæval times had increased with the rapidity they are doing at present, and in any case their increase would be much checked by their persecutions which had carried off, he had calculated, over 382,000 victims. As regards phthisis, notwithstanding the remarks that had fallen from the medical gentlemen present, he could not ascertain any definite facts proving that Jews possess any racial immunity from the disease, though he had not "accused" them of any special liability to it. As Dr. Asher had owned, Jews were sometimes more and sometimes less afflicted by tubercle than their neighbours, showing that environment had most to do with their liability to consumption. In conclusion, he expressed a desire to hear the opinion of trained anthropologists on the main question. If light hair and eyes amidst a race generally dark necessarily proved intermixture, then one-fifth of contemporary Jews afforded that proof, though he had shown that these existed at a very early date. But if not, he saw no reason from history for denying that the Jews of the present day were the direct descendants of the Jews of the Bible.

Note by Mr. F. Galton.

The individual photographs were taken with hardly any selection from among the boys in the Jews' Free School, Bell Lane. They were the children of poor parents. As I drove to the school through the adjacent Jewish quarter, the expression of the people that most struck me was their cold, scanning gaze, and this was equally characteristic of the schoolboys.

The composites were made with a camera that had numerous adjustments for varying the position and scale of the individual portraits with reference to fixed fiducial lines; but, beautiful as those adjustments are, if I were to begin entirely afresh, I should discard them, and should proceed in quite a different way. This cannot be described intelligibly and at the same time briefly, but it is explained with sufficient fulness in the *Photographic News*, 1885, p. 244.



J. Jacobs, del

J. P. & W. R. E. M. Inst.

DISTRIBUTION OF ABILITY
AMONG
ENGLISHMEN, SCOTCHMEN & JEWS

APPENDIX B.

THE COMPARATIVE DISTRIBUTION OF JEWISH ABILITY.¹

[A Paper read before the Anthropological Institute, November 10th, 1886.]

[WITH PLATE XV.]

IN a previous communication to this Institute² I laid before it all the information I could collect as to the racial characteristics of modern Jews, their vital statistics, and bodily measurements. At the same time I expressed my belief that it would be possible to estimate with some degree of precision their intellectual ability as compared with that of other Europeans, and I promised to give this comparison on some future occasion. I shall endeavour to redeem that promise in the following pages. In doing so I find myself in face of two difficulties. The first was to discover a method of measuring ability. The heights of Jews can be calculated easily enough, their vital statistics need only to be collected from the bureaux of Europe. But who shall measure a man's mind so as to compare it with that of others? It was necessary to find some method that would give definite

¹ Parts of this paper were read before the Aberdeen Meeting of the British Association.

² "Journ. Anthropol. Inst.," August, 1885.

results and should have at the same time some claims to scientific accuracy and trustworthiness. Fortunately for me such a method has been before the world for the last sixteen years in Mr. Galton's "Hereditary Genius," and what I shall do in this investigation is only to apply to Jews the same line of argument that he applied to Englishmen in that well-known book. But having found my method, there still remains the second difficulty of explaining it in such a way that it will not be too wearisomely arithmetical. Roughly speaking, the method consists in finding how many eminent men of certain rank exist in each million of Englishmen and of Jews. To do this it is impossible to avoid numerical details, and I fear I must force the reader to pass some time in the uncongenial company of the Rule of Three. Luckily, however, the method likewise admits of being exhibited in a graphic form, and I hope to render it intelligible by means of a couple of diagrams, and by drawing upon the reader's imagination to make two tolerably simple suppositions.

The first is this. Suppose we ordered a tailor to cut out a piece of cloth under the conditions that it should be—(1) of fixed breadth; (2) contain a fixed area; (3) be symmetrical about a central axis; and (4) have no indentations in it. He would soon find that the first snip of the scissors would determine the shape of the cloth. For if (as in the dotted lines of fig. 1, Plate XV) he began to cut within the pattern curve he would have to bring the outline outside it, in order to make up the given area, and if he began outside it he would have to bring the apex within for the same reason. Bearing this sartorial experience in mind we may turn to our second stretch of imagination. I have said that our method consists in estimating the number of eminent men among a million Englishmen or Jews, as the case may be. Suppose that we had these million men collected together on Salisbury Plain, and suppose further that we were gifted with the insight of a recording angel and could arrange them in sixteen classes according to their ability, ranging from the greatest genius among them to the most degraded idiot. A long wall with fifteen projecting walls perpendicular to it would give us, as it were, sixteen pens, in which we could place our various classes. It is obvious that the central or mediocre classes would contain far more than the extremes: geniuses and, luckily too, idiots are far more rare than mediocrities. As a matter of fact, on the hypothesis here employed of the distribution of ability according to the law of deviation from the average, the two central classes would stretch out a broad mass of humanity nearly twice as long as the base line. If now we built a wall round our million men thus classified this would describe a curve

resembling in shape a section of a penny trumpet.¹ But this curve is of the same kind as we previously requested our tailor to cut out for us; it is of fixed breadth, symmetrical round the central axis, of fixed area, that filled by a million men, and it has no indentations, for there cannot be a larger number of men in a class more remote from mediocrity than in one nearer. But if this is so, we know from our former supposition that after a small portion of the boundary wall at the extremity had been built the shape of the remainder would be determined, so that all that would be necessary would be to find the number of men forming the first three or four classes and build the wall enclosing them. Mr. Galton built that wall for Englishmen, if I may say so, in his book "Hereditary Genius," and I have endeavoured to do the same for Jews and incidentally for Scotchmen, with results roughly indicated in fig. 2. This has been drawn out of scale at the extremities for the sake of clearness, and only gives approximately the true shape of the curve of distribution of ability on Mr. Galton's hypothesis, that talent is distributed round an average mediocrity like shots are distributed round the bull's-eye of a target ("Hereditary Genius," pp. 30-34).² With this explanation I turn to the calculations, which enable us, however roughly, to estimate the comparative distribution of ability among Englishmen, Scotchmen, and Jews.

But first we must recall the estimate by which Mr. Galton was enabled to determine the distribution of English ability. As will be remembered, he estimated that of every million Englishmen over fifty, 425 obtained sufficient reputation to earn them a place in Cooper's "Men of the Time," and of these 425 there would be 250 of equal or superior ability to that of an English judge. Assuming then that the exponential law of error applied to the distribution of talent he was enabled to subdivide these 250 into three classes, equally removed from one another. The first class (termed Class X) was composed of only one individual, whose prominence may be conceived from the fact that only 9 of this class are living at one time in the United Kingdom, only 2 among Englishmen over fifty. The next class, G, would include 14 members in each million, or 111 of all ages in the British Isles, while the third class, F, would average 233 per million; so that these islands would have 1,863 individuals of this class, but only 468 over fifty, before which age, as a rule, men do not obtain fame. These results, while enabling us to render more

¹ The well-known exponential curve ($y = \frac{A}{e^{bx}}$) which expresses geometrically the law of deviation from the average. Cf. Quetelet, "Letters on Probabilities;" Venn, "Logic of Chance."

² For explanation of Plate see p. lxviii.

precise what we mean by the terms "genius," "talent," and the like, may also be utilised to compare the abilities of different nations or races, and I propose to ascertain how many X's, G's, and F's, illustrious, eminent, and distinguished men, there have been per million among those Jews who have reached the age of fifty between 1785 and 1885, and by this means to obtain an estimate of Jewish ability as compared with British. It is right to mention that Mr. Galton is nowadays of opinion that we cannot rely upon the absolute accuracy of his results, owing to the variations at the end of a scale ranged according to the law of error.¹ But while this affects the absolute accuracy of his results it need not render a comparative estimate altogether valueless. If I take a metre rod in my hand, thinking it to be a yard measure, all the measurements I take will be too short by an inch in every foot. But if I wish to know whether one log is twice as long as another my metre rod will serve me as well for this purpose as if I were using the bronze bar that gives the standard yard for all England.

We have first to ascertain how many Jews have reached fifty in the century just past. Two methods suggest themselves. Taking the Jewish population of Europe at intervals of a generation in the years 1880, 1850, 1820, and 1790, it can be estimated that a little over 16,000,000 were living at these various epochs. One-fifteenth of these, or 1,040,000, would be males over fifty, and about half that number would have reached fifty and died in the intervals. Or we may calculate the Jewish births between 1735 and 1835 at about 6,400,000, and of these nine-twentieths, 3,160,000, would reach the age of fifty, or almost exactly a million and a half males.² The concurrence of the two methods gives us some confidence in saying that, in the past century a million and a half Jews have reached the age of fifty. If Jewish intellect is equal to the English standard, we should expect to find in dictionaries of biography 1 illustrious Jew, 21 eminent ones, and 350 distinguished men of Jewish blood.

How many can we find? For the purpose of this comparison we must keep rigidly to names which have been considered worthy of insertion by the compilers of biographical dictionaries.

¹ The precariousness of the method consists in—(1) the doubt whether the base is fixed in length and so the classes equally removed: this, however, does not affect the comparison so long as it is kept to one standard; (2) doubt as to the symmetry of the curve: on this some evidence will be offered later on; (3) difficulty of trusting results at the end of a curve where accidental causes tend to disturb the law-abiding quality. Against the last may be urged that such inequalities are apt to disappear when such large numbers as a million are concerned. Appendix II offers an empirical justification for the method.

² It was estimated that the Jewish population in 1735 was 1,300,000, and in 1835 3,500,000. The geometric mean of these was taken as approximately 2,000,000, and a birth-rate of 33 reckoned on this for 100 years.

As Jews live all over Europe it would not be fair to confine ourselves to "Men of the Time," and I have accordingly searched Vapereau for France, De Gubernatis for Italy, and Bornmüller for Germany, though the latter two contain only literary celebrities. For persons distinguished in other careers, and for those Jews who died before dictionaries of contemporary biography came into vogue, I have consulted other compilations of about the same standing. There must be many omissions in looking through such extended lists where the creed is generally not mentioned, but I have, notwithstanding, succeeded in collecting from them 335 names of Jews distinguished in all branches of human activity (see Appendix I).

Not all of these 335 deserve to rank as distinguished in the more technical and restricted sense of the term as used in Mr. Galton's investigations. Of the 425 who in each million of Englishmen obtained a place in the dictionaries, 175, or 41 per cent., were deemed by him unworthy of distinction. I have been even more rigorous with the 335 Jews, and have rejected 50 per cent., leaving only 169 distinguished. Now comes the ticklish task of "placing" these, as it were, in a tripos of all the talents. I think, however, few will quarrel with me if I venture to place in the first rank these four illustrious names:—

BENJAMIN DISRAELI, LORD BEACONSFIELD.

HEINRICH HEINE, the greatest German poet since Goethe, "the wittiest Frenchman since Voltaire," the most potent of the warriors in the intellectual War of Liberation which has freed European thought from its mediæval shackles.

FERDINAND LASSALLE,

"whose genius was such
We scarcely can praise it or blame it too much,"

who, armed with all the culture of his time, became the darling leader of the German working classes, and is still remembered by them as "Messiah Lassalle," who was a jurist and an economist of high rank, an orator of great power, a philosopher and a poet, and who made Socialism a force in European politics. Prince Bismarck has confessed that he learned his Socialism from Lassalle, and it was universally recognised that these two were the most influential men in Germany in 1863, the year in which Lassalle met his death in an ignoble duel at the early age of thirty-eight.¹

FELIX BARTHOLDY-MENDELSSOHN, one of the great musicians

¹ Strictly speaking, Lassalle should not be counted, as he did not reach the age of fifty. But I draw no conclusion from the first class alone, and it is not of much consequence whether we reckon the first two classes as 28 or 29, especially when we have to double them to make them applicable to Western Jews.

of the world, who would deserve this place if only for having re-introduced Bach to us. I might perhaps have included his grandfather, Moses Mendelssohn, as the centenary of his death only occurs in 1886, but I should hesitate to class him as illustrious, and the difficulty of decision is luckily removed by the fact that his birth took place in 1729, six years before the limit of our inquiry.

Here, then, in the first class of intellect, where Jews ought to have been satisfied with one-and-a-half illustrious names, we find no less than four. In the second class, the “senior optimes” of our tripos, I place the following twenty-five:—Berthold Auerbach, Germany’s greatest novelist; Theodor Benfey, the greatest philologist in Germany, the home of philology; L. Börne, second only to Heine in the struggle for Freethought; Cremieux, to whom the French nation recently decreed the honour of a national funeral; E. Gans, the leader of the German school of law and history; A. Geiger, the head of the Jewish Reform movement; H. Graetz, the Jewish Macaulay, though I class him a rank lower than his English prototype; L. Halévy, the musician; Sir W. Herschell, the astronomer; Jacobi, the mathematician, after whom the abstruse functions “Jacobians” receive their name; Sir George Jessel, late Master of the Rolls; Eduard Lasker, leader of the German National Liberal Party; Solomon Maimon, whom Mr. S. Hodgson declares to be the greatest German metaphysician since Kant (possibly because Maimon anticipated his own position): he was certainly a philosophical critic of the first rank; Karl Marx, the literary founder of Socialism and “headcentre” of the *International*; Meyerbeer, the musician; Neander, the Christian theologian; Jules Oppert, the greatest living assyriologist after Rawlinson; Sir Francis Cohen Palgrave,¹ the earliest of our scientific historians of England; Rachel, the greatest actress of all time; Ricardo, second only to Adam Smith in his influence on political economy; Jules Simon, the French politician; Steinthal and Lazarus, the twin leaders of modern philosophical philology; Professor Sylvester, co-founder with Professor Cayley of the modern higher algebra; and two Jewish scholars, M. Steinschneider and Leopold Zunz, whose names are less known because they have given up to Judaism what was meant for mankind, but whose erudition is, I am confident, sufficient to place them in the high rank which is here assigned them.² Here, then, in the second class, where we should expect

I should not have reckoned Palgrave, but that Mr. Galton has himself marked him in black type (of G class). “Hereditary Genius.”

² Many of these names will be unfamiliar to the reader. But if he reflects how unfamiliar the name of Sir G. Jessel, undoubtedly a second class man, would sound in Germany or France, he will perhaps understand that it is

14 eminent Jews to a million, we find as many as 25 to a million and a half, or 17 per million. In the first two classes, then, we have 29 illustrious and eminent names among a million and a half Jews, where we could only expect 22 or 23 of equal calibre among the same number of Englishmen, so that it might seem that Jews have a quarter more great ones of intellect than Englishmen.

But this flattering conclusion is rudely shattered when we turn to the third class of intellect, where Englishmen show 233 names to 99 Jewish celebrities per million. True I have rejected some 30 more names from this class than Mr. Galton would have done. True that these are just the names which would escape notice in a search through biographical dictionaries. But making all allowance for these sources of omission we could scarcely hope to bring up the number of distinguished Jews to that of distinguished Englishmen, whereas if the conclusion we drew from our comparison of the first two classes were correct we should expect many more also in the class of F's. There seems a discontinuity in the Jewish curve—indicated by the sudden droop in the dotted curve in Class F—which casts doubt on our whole method, and certainly traverses directly the favourable conclusion we were first inclined to draw in favour of Jewish ability. The explanation, however, is tolerably obvious. Hitherto we have assumed that our million Englishmen and our million Jews started on equal terms in the race for fame, but we know of course that this is only true for the third of European Jews who dwell in the West of Europe. The two-thirds of Jews who dwell in Russia and Roumania are heavily handicapped, as were indeed the remainder up to very few years ago. If Russia contributed her proper proportion to the 335 Jews on my list, there would be 200 Russian Jews upon it. Instead of that, there are only eight, four of whom have left their stepmother-country and sought a career out of Russia, and of the remaining four, two had to forswear their faith before gaining a reputation, and of the other two, one, Anton Rubinstein, has gained the world's ear by the cosmopolitan art of music, and the other is of fourth class rank in the Jewish speciality of Hebrew. If Russia had not

possible for some of the German and French celebrities mentioned in the list to be Jews. For some of them I have the authority of Mr. Galton's book for putting them in the second class, and for the most obscure I could quote parallel (apparent) obcurities from "Hereditary Genius," e.g., Grynows, Cassini, Mieris, Dussek, Porta, Celsius, who are all rightly enough put in the second class. If it is not exactly true that the world knows nothing of its greatest men, it is certain that it knows nothing of the second class men who prepare the way for the greatest. These remarks apply with still greater force to the list contained in Appendix I, and I have therefore been most rigorous in confining it to the names of those who have been selected by experts celebrity to be included in the dictionaries of biography.

persecuted her Hebrews, and if Russian Jews are of equal calibre to the rest of their brethren, she might have reckoned on 8 men of the rank of Beaconsfield or Heine, 44 of the capacity of Sir George Jessel or Professor Sylvester, and 278 of ability equal to that of an English judge. Thus we seem to have been unfair in assuming that a million and a half Jews have lived to fifty in the past century: only a little more than half a million can be said to have lived, the rest have but existed and have been out of the running in the race for fame. If we take this into consideration, and compare Englishmen with Western Jews only, the first two classes show nearly three times as many as the same number of Englishmen, and the third class, which seemed so poverty-stricken, shows a quarter more names than half a million Englishmen could show. Even here there is discrepancy, and we still have to account for comparative paucity in the third class. Now this is just the class which is likely to be kept down by moderate persecution such as there has been in Western Europe. It would take Russian rigour to repress a Lassalle or a Beaconsfield, a Cremieux or a Lasker. But much less pressure would be sufficient to bar a would-be *savant* from becoming a Professor or perhaps a *savant* at all. And looking through our list we find plenty of evidence of the effects of such persecution. It must have been observed that three out of our four illustrious ones were only Jews by race, not by creed, and of our 22 G's nine have been baptised, and in all, 52 of our list have become Christians, more than one-tenth. Without prying into motives it is notorious, in cases like those of Beaconsfield, Heine, Börne, Gans, Ricardo, that conversion was adopted as the only means of obtaining the *carrière ouverte*. Of the 52 we find 28 born before 1810 and living their life before the year of freedom 1848, whereas of our list 114 only were born before 1810, 213 afterwards. The converts thus formed a quarter of those flourishing before 1848, and only a tenth of those afterwards. Similarly in Austria during the days when persecution equal to that of Russia prevailed we have only 5 celebrities born before 1810, no less than four of whom gained fame elsewhere, against 27 born in 1810-50. Another sign of persecution is the migratory habits of able Jews, for, as Mr. Galton has remarked, when a career is open to them able men are the last to leave their country. The Heine family form a typical group. The poet is buried in *Père la Chaise*; one of his brothers became Ritter von Geldern at Vienna, another was Court Physician at St. Petersburg; his sister married and became Princess della Rocca in Italy; while old Solomon Heine, their uncle, was the only one who remained faithful both to his creed and his country. In all 67 of my list, exactly one-fifth found fame in countries other than that of their birth, England

gaining as many as 30, and France 24 men of ability as a reward for their liberality. We could almost test the amount of persecution by the percentage of each country's loss, Russia coming first with 50 per cent., then Austria with 37, Germany 30, Italy 12, France 2, while England has not lost a single able Jew, but has gained as many as she herself produced.¹ With this evidence of persecution even in Western Europe we can explain the paucity of third class Jews, and may conjecture that but for this we should have nearly as many more third class as we have in the first two, who include a treble share. On the whole, then, with these corrections we may say that there is about twice as much chance of finding a distinguished man among Western Jews as among Englishmen.

Thinking that it would be desirable to apply the same method to another race, I have selected Scotchmen as a likely test of the validity of our method. I went through Irving's "Book of Eminent Scotchmen," and selected out of the 3,000 names those who seemed to me to have reached first and second rank during the past century. I also estimated the number of Scotchmen who reached fifty years in that period, and found this to be 960,000, or almost exactly a million. If their ability were the same as Englishmen, they should have one first class and fourteen second class. Instead of this I calculate that four Scotchmen—Carlyle, Gladstone, Macaulay,² and Scott—had reached first class rank (we might say 4½ if we reckon Byron, who was Scotch on his mother's side), and 20 G's—Sir C. Bell, Sir D. Brewster, Lord Brougham, Burns, Lord Campbell, Erskine, David Forbes, General Gordon, Sir W. Hamilton, Sir James Ivory, Lord Jeffrey, D. Livingstone, Sir Chas. Lyell, J. Clark Maxwell, James Mill, J. S. Mill, H. A. J. Munro, Sir C. Napier, Sir W. Thomson, James Watt. This would give Scotchmen a

¹	Born.	Per cent.	Emigrated.	Immigrated.	Lived.	Per cent.	Per cent. Jewish Population.
Austria ..	32	12	12	4	24	9	14
England ..	30	11	0	30	60	21	.6
France ..	53	19	1	24	75	27	.8
Germany ..	128	47	46	5	87	30	7
Italy ..	24	9	3	2	23	9	.5
Russia.. ..	8	2	4	1	4	1	60
United States..	6	2	1	2	7	2	7

From this it would seem that England, France, and Italy have produced the largest number of Jewish celebrities in proportion to their numbers.

² I reckon Macaulay first class not only on account of his literary productions, though these are too much underrated nowadays, but because of his proved abilities as administrator, orator, and conversationalist.

position superior to that of Jews in general, including those of Russia, but intermediate between Englishmen and Jews of Western Europe.

This result may be checked by an application of our method, which leads to the most startling and curious results of our investigation. In assuming our curve of the distribution of ability to be symmetrical, we have opened the way to estimating the excess of ability by calculating its deficit. There should be as many in each class below the average as above. Now in several special instances this is true for Jews. The curve serves to distribute musical or linguistic ability as well as general ability. If Jews have, as we shall see they have, more musicians and philologists at the top of the scale, they should have more deaf-mutes at the lower end of it; we know they have. And the method cuts both ways. Jews are justly proud of having less criminals than their neighbours. But that would imply that they have less moral enthusiasts at the top of the moral scale, and more proportionally of average morality, or in other words more worldly persons: that does not seem opposed to facts.¹ So too, turning again to general ability, if Englishmen, Scotchmen, and Jews are in this order as regards intellect, they should retain the same order as regards want of intellect. This is so, for while Englishmen have 3,050 per million afflicted with mental disease, Scotchmen have 3,400, and Jews 3,900.² The same numbers ought to give the proportion of eminent men of the first four classes, X-D, among the three races. This result of our method was a surprise to myself, and I was deterred from using it by finding that the United States has the smallest proportion of lunatics among civilised states. But instead of disproving our position we have here a remarkable confirmation of it. For the United States have not produced a single man of the first class, except Washington and perhaps Emerson, in the last century. A further confirmation of this curious fact is to be seen in the parallelism of high ability and high lunacy rate in the Protestant states of Europe as compared with the Catholic.³

¹ Other illustrations may be adduced, which seem to bear out this law in the case of Jews as compared with others. Thus they have the reputation of being both more charitable and more mean than their neighbours; of having more superstitious persons and more sceptics; they certainly have both more rich and more poor. Thus their curves of altruism, of faith and of acquisitiveness, seem to conform to the law.

² I take the lunacy rate of England and Scotland from Oettingen, "Moralstatistik," Anhang Tafel XCIV; that of Jews from those of Prussia in "Zeits. Preuss. Stat.," 1882, p. 190. These numbers rather exceed those contained in the four extreme classes, as is indicated in fig. 2, by placing the boundary line within the fifth class from the bottom.

³ It might seem that all progress is impossible if any increase at the top of the scale is counterbalanced by a deficit on the other hand. But true progress

This is not the only piece of instruction we receive from the comparative lunacy rate of the three races we are comparing. The figures themselves have enabled me to interpolate the numbers in the various classes, and to ascertain with some degree of accuracy the number of men of only average ability among them, as in the table attached to Plate XV. There are, according to Mr. Galton, 256,000 of the mediocre class A among a million Englishmen; I reckon by a process of interpolation that there are only 239,000 among Scotchmen, and 222,000 among Jews. It follows that reckoning from the bottom of the scale the 722,000th Jew is equal in ability to the 739,000th Scotchman and the 756,000th Englishman. Or in other words, if we took a hundred men at hazard from each of the three races, the 72nd Jew, reckoned from the least able, would equal in ability the 74th Scotchman or the 76th Englishman, and would be superior in ability to the 72nd of either of the other two races¹ (fig. 3). Thus we arrive at last at a real comparative estimate of Jewish ability, which we may state roughly in the following way. The average Jew has 4 per cent. more ability than the average Englishman, and 2 per cent. more than the average Scotchman. I do not lay very much stress on the accuracy of this result; a Scotch investigator on the same method might possibly invert the order. But I feel some confidence in the method, and consider that by its means we may one day be enabled to judge the relative ability of various nations and races. (See Appendix II.)

However satisfactory this result may be to all concerned, we cannot close the inquiry before ascertaining the comparative distribution of Jewish ability among the different branches of human activity. If Jews got into the reference books only for acting, or for chess-playing, or for proficiency in Hebrew, we could not draw any such conclusions as that just mentioned. We must see in what branches Jews show most ability: we must examine their quality as well as their quantity. But before doing so we may gather up a few collateral results of interest. We have already mentioned and explained the large number of baptised Jews in the list. Equally striking is the comparatively large number of Jewesses, no less than thirteen, figuring there as actresses, writers, or leaders of *salons*. At the beginning of this century almost all the chief *salons* of Berlin were presided over by Jewesses—e.g., Dorothea Mendelssohn-

consists in raising the average, elevating Class A into Class B, from which more at the top of the scale and less at the bottom follow inevitably. We must "shift the origin," as the mathematicians say.

¹ This is an application of Mr. Galton's method of percentiles explained in "Journ. Anthropol. Inst.," vol. xiv.

Schlegel, Rahel van Ense, Henriette Herz. The best known English *salon* of recent date was also attracted round a Jewess, Countess Waldegrave. For their numbers, too, the Sephardic or Spanish Jews make a goodly show with twelve celebrities instead of three, which would be a proper proportion: to them belong the two Disraelis, Basevi the architect of the Fitzwilliam Museum, Cambridge, Sir Moses Montefiore, and David Ricardo. But most striking of all is the large number of men of half-Jewish blood¹. I have included twenty of these in the list, though all but two, Franzos and Salvador, were brought up as Christians, but they have come under Jewish influence both by heredity and from their relations. It may be of interest to enumerate them: Edwin Booth the actor, H. J. Byron, of "Our Boys" celebrity, F. Delitzsch, G. Ebers, the Egyptologist and novelist, Ludovic Halévy, Paul Heyse, Sir John Herschell, Paul Lindau and his brother, Bernal Osborne, Francis Turner Palgrave the critic, W. Gifford Palgrave the traveller, Prevost-Paradol, Jules Simon, Sir Arthur Sullivan, and Sir H. Drummond Wolff. Altogether 5 per cent. of the whole, and yet mixed marriages are not anything like so numerous as that, and as most of my examples are English I have probably missed a large number abroad. I have not included remoter descent, as we can scarcely term them Jews in any sense of the word. Besides, I could only find five examples, of whom the eminent Sir John Millais is one, though where his Jewish blood came in I am unable to ascertain. The paucity of later generations of Jewish inter-mixture may be due to difficulties in tracing them, or, as I am inclined to suspect, to the infertility of mixed marriages.

Leaving these subsidiary results, let us turn to the *distribution* of Jewish talent. Here, fortunately, I am still able to compare with Mr. Galton's results, as he gave in his book (p. 8 n) a rough analysis of the specialities of the men of the time in Europe generally, and not alone in England. Reducing these to "per-millages" (proportion per thousand celebrities), and doing the same with my own results, I obtain the following table:—

¹ Mr. Grant Allen has already made the same observation. "The list that can be compiled of distinguished persons of half-Jewish blood is something simply extraordinary, especially when one remembers the comparatively small sum-total of such intermarriages" ("Mind," vol. viii, p. 504-5).

	Europeans.	Jews.		Europeans.	Jews.
Actors ..	21	34	Miscellaneous ..	4	3
Agriculture ..	2	..	Metaphysics ..	2	18
Antiquaries ..	23	26	Musicians ..	11	71
Architects ..	6	6	Natural Science ..	22	25
Artists ..	40	34	Naval ..	12	..
Authors ..	816	228	Philologists ..	18	123
Divines ..	130	105	[Poets* ..	20	36]
Engineers ..	18	9	Political Economy	20	26
Engravers ..	3	..	Science ..	51	52
Lawyers ..	44	40	Sculptors ..	10	12
Medicals ..	31	49	Sovereigns ..	21	..
Merchants ..	12	43	Statesmen ..	125	88
Military ..	56	6	Travellers ..	25	12

* Already included in Authors.

We cannot assume from this list that all cases where Jews have a higher "permillage" they produce more experts per million in that branch; it merely implies that of those who do obtain distinction a larger proportion obtain it in the particular study. In short, the table gives a comparative estimate of English, or rather European, and Jewish *interest* in particular studies, and thus only indirectly of their respective capacity. With this proviso we may sum up as follows. Jews have no distinction whatever as agriculturists, engravers, sailors, and sovereigns. They are less distinguished than Europeans generally as authors, divines, engineers, soldiers, statesmen, travellers. The two lists are approximately equal in antiquaries, architects, artists, lawyers, natural science, political economy, science, sculptors. Jews seem to have superiority as actors, chess-players, doctors, merchants (chiefly financiers), in metaphysics, music, poetry, and philology. On the whole, these results correspond with the rough inductions of common experience. I should, however, have expected a much larger contingent of lawyers and political economists among Jews than among *les autres*, and I am surprised to find Art so equally represented. I have only one artist on my list who reaches even third class rank, Josef Israels, for of course I do not reckon Sir John Millais on the strength of a few Jewish corpuscles in his veins. Most persons will be equally surprised to observe equality in science, both in what Mr. Galton calls natural science and in science pure and simple, chiefly mathematical. As regards the former, of course Jews have no Darwin. It took England 180 years after Newton before she could produce a Darwin, and as Britishers are five times the number of Jews, even including those of Russia, it would take on the same showing 900 years before they produce

another Spinoza, or, even supposing the double superiority to be true, 450 years would be needed. But in the lower ranks even of biology Jews have done and are doing good work. Bernstein, Cohn, Remak, Rosenthal, and Valentin as physiologists, Cohnheim, Hirsch, Liebreich, Lombroso, and Traube as pathologists, will be recognised by specialists, while F. Cohn is perhaps the third greatest botanist in Germany. But Jews show to more advantage in abstract science, mathematics and astronomy. The history of pure mathematics during this century would show large blanks if the names of Jacobi, Sylvester, Kronecker, and Cremona were removed. In astronomy we have the cluster of the Herschells, the name of Goldschmidt, who discovered fourteen asteroids in the "fifties" and "sixties" when such discoveries were not an everyday occurrence, and W. Meyerbeer, brother of the musician and author of the first great chart of the Moon. Altogether, then, I conclude that Jews take their full share in the scientific work of the day. This result of the table, however, was so contrary to my expectations that I have attempted to check it by other estimates. In Sir John Lubbock's Jubilee speech at York I find eight Jewish names out of the 289 who are mentioned as contributing to the last fifty years of science: this is considerably above their proper proportion, even when including the Russian Jews. Again, in M. de Candolle's book, "*Histoire de Science*," I find 10 Jews holding 16 out of the 824 chairs as foreign members of the scientific academies, which he uses as a test of scientific ability. This is just the right proportion, the Jews of Europe being 7 out of 333 million.

Less surprise will be felt at the subjects in which Jews seem to show superiority. In acting that is better recognised on the Continent than here, and the same may be said of medicine: in Austria one may say *Ubi tres medici duo Judæi*. The Jewish merchants who get into the dictionaries are of course the great financiers. But it is chiefly in music and philology that Jewish superiority is most marked—music sixfold, and in philology there seems to be nine times as much Jewish talent as European. For the former, besides the great names of Mendelssohn, Halévy, Meyerbeer, Rubinstein, already mentioned, we have many lesser lights like Sir Julius Benedict, Sir M. Costa, F. Cowen, Joachim, Pauline Lucca, Moscheles, Sir A. Sullivan. English music, to say the least, would be almost non-existent without these Jewish names. Even more striking is the number of Jewish names distinguished in philology. These are not alone connected with Oriental and Semitic philology like Benfey and Oppert, but they count a goodly number of classical scholars, Bernays, Bernhardy, Lehrs, Friedländer, H. Weil, to whom we may add Freund, the author of the Latin Dictionary, which is the basis

of all those used in England. The names of Lazarus and Steinthal are known wherever the principles of philology are studied. In modern languages, too, Jews have done good work. Sanders has done for German what Littré did for French, and a Jew, the well-known Ollendorf, may claim to have taught languages to the largest number of people by the clumsiest method of teaching.

If we may venture to inquire into the causes of the Jewish superiority established on these somewhat hypothetical grounds, there are various reasons which can be given. We have to take account of their residence in cities, always more conducive to the life intellectual. From this, too, follows their addiction to commerce as distinguished from industry, and as the former implies head work, and the latter handicraft, mental capacity must be aided by this fact. The care Jews give to their children's education is well known, and must help. All Jewish boys have hitherto had to learn Hebrew, as well as the vernacular, and this must further mental progress. Dissenters generally seem more intellectual because they have early to think out their differences from the generality. In the case of Jews, persecution, when not too severe, has probably aided in bringing out their best powers: to a high-spirited race, persecution, when there is hope of overcoming it, is a spur to action. The solidarity of Jews and the aid they willingly give to young men of promise assists in developing whatever talent there may be in the community. The happy home-life of Jews, and the practical and undogmatic character of their religion, together with the absence of a priesthood, have contributed to give the *corpus sanum*, and thus the *mens sana*. Jewish reason has never been in fetters, and finally the weaker members of each generation have been weeded out by persecution which tempted or forced them to embrace Christianity, and thus contemporary Jews are the survival of a long process of unnatural selection which has seemingly fitted them excellently for the struggle for intellectual existence.

Turning from these general causes, it would be of interest to discover the reasons for the special ability of Jews in music, mathematics, metaphysics, philology, and finance. The chief cause of the musical pre-eminence of Jews lies, in all probability, in the home character of their religion, which necessarily makes music a part of every Jewish home: this too was the only direction in which their artistic sensibilities could be gratified. Jewish philology is in part due to their frequent change of country, and also to the fact that they have had an additional sacred language besides the vernacular. As regards finance, here the Jews have had their greatness thrust upon them: the

world forced them to become financiers centuries before finance became a power, and must not complain if Jews now profit by their start in financial experience. I am inclined to think that their finance has something to do with their decided leaning for mathematics. Metaphysics, with Jews as with others, is an offshoot of theology, but even here we can trace the influence of their mathematical tendency in the abstract nature of their thought. Altogether the productions of Jewish intellect strike one as being predominantly *abstract*—a result, doubtless, of their long life in cities and of their exclusion from Nature on the one side, and from the education which lies in handicrafts on the other. We may expect great mathematicians and philosophers from them, but not, I think, great inventors, biologists, or painters, till they have had time to throw off the effects of their long seclusion from Nature.

Finally, it is right that I should conclude with a confession and a warning. The former is perhaps unnecessary, but it is that this paper, which puts Jewish ability in a favourable light, emanates from a Jew. I am afraid this is bad taste, though I might defend myself by the example of the great Swiss naturalist, De Candolle, who has written a large book to show how superior Swiss naturalists are to all others. I should have been glad to hand over the investigation to a Gentile if I could have found one with sufficient interest in Jews to undertake the task, patience sufficient to look through some 30,000 names, and temerity enough to classify all the Jewish talents in their order of merit. Failing this, I have had to risk the imputation of bad taste, and shall be content if I avoid that of bad science. I can only say that I have throughout been conscious of the danger of being biased in favour of Jews, and have guarded against it to the best of my power, taking a final precaution in warning the reader of the fact. At any rate, I do not think the results I have reached run counter to any common impression, and certainly not, in liberal England, to any popular prejudice.

APPENDIX I.

*Jewish Celebrities, 1785–1885.*¹

CELEBRITY is a relative term. In some cases it may mean that ecclesiastical fame which M. Renan has declared to be the one thing that is not vanity. In other cases, again, it may only indicate the local notoriety of a prominent member of a clique. There is always

¹ This list appeared first in the *Jewish Chronicle* of 25th September, 1885. M. Isidore Loeb and Professor Kaufmann have been good enough to give me some additions and corrections. Owing to these, the numbers given in the body of the paper no longer exactly answer to the data given in the Appendix, but the changes were too unimportant to need a revision of the numerical results.

the danger of including in any list of Jewish celebrities cases of the latter kind. This is the more probable with living notorieties whose true proportions are obscured by their very proximity to us. On the other hand, Jewish celebrities are scattered over all the lands of civilisation, and any collection made in one of them is too likely to ignore Jews of other countries whose fame may be local, but none the less deserved. Finally, now that the barriers of demarcation are removed, there is often a difficulty of identifying eminent men as Jews, and, still more, the necessity of excluding from our list men credited with being Jews without any warrant.¹

I have endeavoured to avoid these pitfalls by obtaining the following list of Jewish celebrities from the works specially devoted to recording the names of those who stand out from the rest of their countrymen because they have added to the wisdom or delight of the world. Almost without exception I have obtained the names of living Jewish celebrities from the following four works:—

Vapereau, "Dictionnaire des Contemporains," Paris, 1880 (7,528 names); T. Cooper, "Men of the Time," London, 1880 (3,108 names); A. de ubernatis, "Dizionario degli scrittori contemporanei," Florence, 1879 (4,525 names); Bornmüller, "Schrifstellerlexikon," Leipzig, 1882 (2,367 names).²

For Jews of the past I have had resort to Oettinger, "Moniteur des Dates," Dresden, 1865-82, but as this includes no less than 167,000 names, I have not gone through it, but merely referred to it for names which I otherwise knew to be well known. In all I have obtained 330 names of Jews born between 1735 and 1835, and celebrated between 1785 and 1885, whom the compilers of these works consider worthy of distinction.³ I have only included those who have come under Jewish influences in their youth.

For reasons explained in the foregoing paper I have endeavoured to class these under various specialities in four different orders of merit. The few "illustrious" Jews are printed in black type, those whom I regard as "eminent" have their names in small capitals; the next grade including "distinguished" Jews have been placed in italics, and the remainder in ordinary type. The names of those who are Jews only in blood and not in creed, have an asterisk affixed to them; those of half-Jewish blood have an

¹ There is scarcely a celebrity of modern times whose name is at all Biblical, or nose not altogether snub, who has not been written down as Jew. Gambetta, Brahms, G. H. Lewes, Adelina Patti, Castelar, are among those I have seen. Even George Eliot could write, "You will be glad to hear that Helmholtz is a Jew." (M. Blind, George Eliot, p. 91.)

² I have obtained a few additional names from Warne's excellent "Bijou Biography" and from F. Martin's "Dict. Cont. Biog." On the other hand, I have not accepted the few Jewish names to be found in Drak's "Dict. American Biog.," 1871, or Heaton's "Australian Dict. of Dates," 1878 (7 out of 924), as their contents did not seem to me up to the level of the other authorities. I felt, however, tempted to add Sir Julius Vogel from the last-named.

³ Servi, "Gli Israeliti d'Europa," 1873, has some 218 names, of which only 53 appear in the present list. Morais' "Eminent Jews of the Nineteenth Century" contains in the index some 285 names, only 74 of which occur in my list.

obelisk prefixed, which also implies another faith except in the cases of Franzos and Salvador. A single date after a name is that of birth, and implies that the subject is, so far as I can ascertain, still living.

The world delights more to honour those who delight it than those who instruct it, and we may therefore begin with the Protean aspects of

ART.

BELLES LETTRES.—And first among poets we have the great name of **Heinrich Heine*** (1799–1856), whom Matthew Arnold goes so far as to term “the greatest name in European literature since Goethe.” Austria boasts of five Jewish poets, *L. A. Frankl*, Ritter von Hochwarth (1810), *K. Beck** (1817), and *S. Heller* (1823), author of “Ahasver,” *L. Wihl* (1819), *L. Kalisch* (1814), and France, *E. Manuel* (1823). Italy has *D. Levi* (1821), and *S. Romanelli* (1757–1814), Germany, *M. Beer* (1800–33), author of “Struensee,” and brother of the composer, and *S. Lipiner* (1850), who made a sensation a few years back with his “Entfesselte Prometheus,” and finally, Denmark had *Henrik Hertz* (1798–1878). The next highest form of literary art at the present day is the novel, “prose-poetry,” as the Germans call it. In this branch there occur the great names of **BERTHOLD AUERBACH** (1812–82), and **BENJAMIN DISRAELI** (1804–81), while **†K. E. Franzos** (1848) bids fair to reach equal heights. These are followed by *L. Kompert* (1822) and *A. Bernstein* (1812–83), the latter of whom turned from novel-writing to popularising science. These with *S. Kohn* (1825), the author of “Gabriel,” and *M. Goldschmidt* (1819), may be regarded as the specifically Jewish novelists, and specimens of the work of the five foreigners have been translated into English, as well as into most European languages. Judaism may claim half of the brilliant talents of **†Paul Heyse** (1830), and there seems to be some probability that *Jules Verne* (1828) is a Jew. The novel is a branch of literary art in which women attain considerable skill. **Madame Fanny Lewald*** (1811), Heine’s sister, the **Prinzessa della Rocca*** (1810), and the Danish novelist *Olivia Levison* (1847), known as “Sylvia Bennett,” are the representative Jewesses. My authorities add the names of *A. Meissner* (1822–85), *Max Ring* (1817), and *A. Schrader* (1815–78). Jewish dramatists may follow Jewish novelists. The two most conspicuous names here are *S. Mosenthal* (1821–77), whose “Leah” traversed the boards of Europe, and **†Ludovic Halévy** (1834), the composer’s nephew, and the most prolific of contemporary French dramatists. **J. v. Weilen** (1830) and **Hugo Bürger** (1846) are two of the chief dramatists in Austria. **E. Abraham** (1833), **H. J. Cremieux** (1828), **A. P. A. Milland** (1836), contribute to the French stage, while *D. Kalisch* (1820–72), *E. Jacobson* (1833), and *S. Schlessinger* (1825) have contributed many comedies to the German stage. The late **†H. J. Byron** (1835–84) was partly of Jewish blood, his mother being a daughter of Dr. Solomon who found “Balm in Gilead.” We have now to add

litterateurs of the essayist type. Under this head we may place L. BÖRNE* (1786-1837), a brave warrior in the literary War of Liberation, G. Riesser (1806-63), K. Blind (1833), whose celebrity is more political than literary. A writer of quite a different class was Grace Aguilar (1816-47), whose volumes on "Home Influence" and the like still find favour among Englishwomen. To them we may add literary critics, the chief Jewish name in this branch being that of George Brandes (1842), to whom we may add I. Dierasli (1766-1848), of "Curiosities of Literature" fame, and M. Bernays* (1834).

PRESS.—In the last two rubrics we have almost passed the line which separates *belles lettres* from the press to which we may now turn. The chief reviews of Germany, *Deutsche Bundeschau*, *Gegenwart*, *Nord und Sud*, are edited by Julius Rodenburg (1831) and †Paul Lindau (1839) respectively. Other German journalists of Jewish origin are I. Leiderer ("Ichneumon," 1810), O. Gumprecht (1813), musical critic, O. Blumenthal (1805), and M. Saphir (1795-1858), a comic writer of some power. There are besides two colonies of Jewish journalists situated at Vienna and Paris, the centres of *feuilleton* writing. At the former capital Heine's brother, G. Heine (1805), won his title of Ritter von der Geldern, and D. Spitzer (1835), author of *Wiener Spaziergänge*, M. Hartmann (1821), M. Barach ("Dr. Märzroth") (1818), I. Jeitteles* (1814, "Julius Seidlitz"), F. Gross (1849), E. Kuh (1828-76), and I. Nordmann (1820) have earned their meed of praise in commenting on the events of the day. In the Parisian Brotherhood of the Pen we have A. Wolf (1825), in a way the *doyen* of the French Press whose position corresponds with that of G. A. Sala on our own, and A. Weill (1813), whose relations with the press are now in the past. Besides these there are, or were, Leon Halévy (1802-83), the composer's brother and the dramatist's father, †Prevost-Paradol (1829-79), E. Naquet (1819), and M. A. Millaud (1829), both brothers of French Senators, Joseph Cohen (1817), and two Germans located at Paris, Max Nordau (1849) and A. Cohn (1819), the latter a literary Jack of all trades, who is known under the soubriquet of "August Mels." The names of the great Paris publishers, Michel (1821-75) and Calmann Lévy (1819), may be added to the list of Parisian journalists. Italy gives us C. Levi (1852), and Denmark had L. L. Nathanson* (1780-1868).¹

MUSIC.—Turning from what we may call the arts of rhyme and reason, we may now enumerate Jewish celebrities in the art of rhythm and melody. F. B. Mendelsohn* (1809-47) stands out foremost here as the *wunderkind* of modern music; apart from the intrinsic merits of his own work he would deserve the world's gratitude for having re-discovered Bach. Some would reckon the

¹ The above names appear in Vapereau, Bornmüller, and De Gubernatis. To many of my readers names of special correspondents like M. de Blowitz, *Times* correspondent at Paris, and the late Dr. Schlesinger, London representative of the *Kölnische Zeitung*, would seem to deserve insertion as well as many of these obsecurities.

musical merits of J. E. F. HALÈVY (1799–1862) as even superior to that of Mendelssohn, and J. MEYERBERG (1794–1864) had the merit of being Wagner's master in his "first period." *Ignaz Moscheles* (1794–1870) comes, perhaps, next in the list of Jewish composers, though his reputation is much narrower than that of J. Offenbach* (1819–82), the musical voice of the Second Empire. Our own England offers the promise of even higher things in F. H. Cowen (1852). Most of the "titular" musical leaders in this country are reported of Jewish blood, *Sir J. Benedict** (1805–85), *Sir M. Costa** (1810–84), "born in Naples of an old Spanish family" (a Sephardi), and †*Sir A. Sullivan* (1844). Of minor composers we may select of Frenchmen N. M. Alkan (1803–75?), Jules Cohen (1835), and Em. Jonas (1827); of Englishmen, I. Nathan (1792–1865), to whose music Byron wrote his "Hebrew Melodies," and C. K. Salaman (1814), and I also find a Swede of some note in *J. A. Josephson (1818). But Jews have perhaps achieved greater triumphs as executants than as composers. The piano has found its greatest master at the present day in **Anton Rubinstein* (1829), and **Joseph Joachim* (1831) may be said to play first fiddle wherever he goes. Of great teachers *Felicien David* (1810–73) for the violin, and *Ferdinand Hiller* (1813) for the piano, may be here mentioned. H. Heller (1813), the brothers Herz (1806), and J. S. Herz (1797) are well-known French pianists, and the eccentric H. Cohn* ("Père Hermann") is a violinist of some reputation. The sweetest singers of Israel are *J. Braham* (1774–1856), who used invariably to compose his own songs, among which the "Death of Nelson" has become an English *Volkslied*, and *Pauline Lucca** (1840).

THE STAGE owes much of its attractive powers in recent years to Jewish genius. The greatest name among French tragedians is acknowledged to be that of *RACHEL FELIX* (1820–58), and her only rival in European fame is nowadays *S. Bernhardt** (1844). Other actresses of note on the French stage have been Madame Judith (1827), a relation of Rachel's, and I. Nathalie (1816). Of Jewish actors I find mentioned with honour *L. Barnay* (1842), *A. Sonnenthal* (1834), *L. J. Booth* (1796–1853), and his son †*Edwin Booth*, *B. Davidson* (1818–72), *F. L. F. Loewe* (1816), *D. E. Bandman* (1839), and *E. Blum* (1836). Of great managers mention should be made at least of *B. Lumley* (1812–75).

PAINTING AND SCULPTURE.—Finally we may conclude this list of Jewish contributors to Art by an enumeration of Jewish painters. *Sir J. E. Millais* has, we understand, Jewish blood in his veins, but we cannot include him among Jewish painters. The first place among these is held by *Josef Israels* (1824), celebrated for his delineations of Dutch fisher-life. Then comes *E. Bendemon* (1811), and *A. Solomon* (1835–72), once well known for his painting, "Waiting for the Verdict"; *S. A. Hart* (1806–81) deserves a place here as the first Jewish Royal Academician; *W. Goodman*. My authorities add the following names:—*J. A. M. Jacobs* (1812), the brothers *C. E. Lehman* (1814) and *R. Lehman* (1819), *E. Levy* (1826) and *H. L. Levy* (1840), *B. Ulmann* (1829), and *J. Worms*

(1832), all in France, and F. E. Meyerheim (1808-79), in Germany. Of sculptors there are two who have attained to some eminence in France, *Adam Solomon* (1818-81) and H. J. Daniel (1804), while E. Wolff (1814) is known in France, and another E. Wolff (1802) in Italy. Only two architects occur in my authorities, *G. Baservi** (1795-1845), Lord Beaconsfield's uncle, and architect of the Fitzwilliam Museum, Cambridge, and A. Hirsch (1828).

II.—SCIENCE.

Turning from art that delights to science that instructs, we may begin by enumerating the few Jewish names who have reached any kind of eminence in PHILOSOPHY. Of these the most *genial*, though not the best known or the most influential, is *Solomon Maimon* (1753-1800), one of the most remarkable men that Judaism has produced. Though only trained in the ordinary Rabbinic schools, he displayed metaphysical powers of a high order. His genius was recognised by Kant, and though soon obscured and eclipsed by the great Epigonoi, Fichte, Hegel, and Schelling, it is nowadays recognised that his criticism struck at the root of the Kantian system. His remarkable self-analysis in his autobiography would stamp him as no ordinary man; it is the nearest to Rousseau's "Confessions" of all self-revelations. Maimon was also one of the earliest forerunners of Symbolic Logic (cf. Venn, "Symbolic Logic," pp. 377, 420). The only other names of importance are those of H. STEINTHAL (1828), *M. Lazarus* (1824), and *A. Franck* (1809), Membre de l'Institut and editor of a philosophical encyclopædia. The former, however, has gained his greatest laurels in philology, the two latter in literature of an essayist type. Lassalle perhaps deserves mention here for his book on Heracleitus. One of my authorities adds a name unknown to me, *Melchior Meyr* (1810-71).¹

HISTORY, philosophy teaching by example, has chiefly attracted Jews so far as it affects themselves. Of Jewish historians, H. GRAETZ (1817) is undoubtedly the greatest, and deserves to rank by himself, though his judgment is not as great as his erudition. *J. M. Jost* (1793-1864) comes next to him, and then *†J. Salvador* (1798-1860), who was a potent influence in his way in France. I. De Costa* (1798-1861) also wrote the history of the nation he had deserted. Jews have also written history of other nations, notably Sir F. COHEN PALGRAVE* (1788-1861), the first in point of date of the scientific historians of England. *G. F. Herzberg* (1821), the Greek historian, is, I believe, a Jew, and so were S. Romanin (1808-61), the historian of Venice, and P. Jaffé* (1819-70), who drew up the *Regesta* of the Popes. W. Frankl* (Fraknoi) (1843) is one of the chief historians of Hungarian, and M. Philipson (1846) and H. Breslau (1848) are German historians of promise. Young Prof. L. Geiger (1848) promises to be the leading authority on the Renaissance; H. Cohen (1810) an authority of numismatics. A

¹ Professor H. Cohen, the Kantian, has not yet got into the dictionaries. N. Krochmal (1785-1840), who made a not unsuccessful attempt to combine

few antiquarians may follow the historians. *M. A. Levy* (1817–72), one of the chief authorities on ancient epigraphy, *J. L. Klein* (1810–76) wrote the most voluminous work on the history of the drama; *G. Coen* (1847), an Italian bibliographer, and *Mr. L. B. Phillips* (1842), the compiler of an extensive “Dictionary of Biographical Reference.”

ECONOMICS studies the sinews of history, and Jewish economists have been some of the most influential names in the science. *DAVID RICARDO** (1772–1823) is only second to Adam Smith. *KARL MARX* (1808–83) was the “headcentre” of modern Socialism, though this was led socially by the gifted *FERDINAND LASSALLE* (1825–63), who will take even higher rank when we come to politicians. Other Jewish economists are *E. Morpurgo* (1840–85), and *E. Luzzati* (1848). Statistics is the handmaid of Economics, and three Jewish names, *M. Block* (1816), *J. Körösi* (1844), and *L. Levi** (1821), are distinguished in this science.

MATHEMATICS.—Here we reach another speciality of Jews. At their head stands the name of Professor *J. G. SYLVESTER* (1814), probably the greatest living pure mathematician, if his rival and friend, Professor *Cayley*, does not usurp that place. Of equal rank in the past was *C. G. J. JACOBI** (1804–51), after whom certain intricate functions are termed “Jacobians.” Then come *L. Kronecker* (1823) and *L. Cremona* (1830), and these are followed by *H. Filipowski* (1817–72), the compiler of some anti-logarithmic tables, *O. Terquem* (1782–92), *M. Levy* (1791–53), *B. Gompertz* (1779–1865), the first actuary of the “Alliance,” and one of the earliest students of “Double Algebra,” *L. Bendavid* (1762–1783), Mendelssohn’s friend, and *I. Blum* (1812).¹

ASTRONOMY has some very great names of Jewish blood, though some of them kept not their Jewish faith. Of these the greatest is *Sir W. HERSCHELL** (1738–1822), and his sister, *C. Herschell** (1750–1848). To these we can add *H. Goldschmidt* (1802–66), the discoverer of 14 asteroids, *W. Meyerbeer*, Meyerbeer’s brother, and first cartographist of the moon (1797–1850), and *M. Lœwy* (1833), of the Paris Observatory.

BIOLOGY.—Few Jews seem to have devoted themselves to this subject, though *F. Cohn* (1828) and *S. Pringsheim* are among the greatest names in German botany. In the department of physiology, Jews, however, count a large number of comparatively important names. *E. Remak* (1816–65) was one of the greatest in the past, *G. G. Valentin* (1808–83) wrote one of the best text-books in the “fifties,” and “Valentin’s knife” is still used by specialists. Both *J. Bernstein* (1839) and *J. Rosenthal* (1836) have had books in the “International Scientific Series,” and *J. Cohnheim* (1839–84), *H. Cohn* (1838) the oculist, and *G. Schwalbe* (1846) are other Jewish

Ibn Ezra and Hegel, will probably always be kept out of them by his choice of Hebrew to express his views.

¹ *G. Cantor*, the historian of mathematics, *T. Reiss*, the physicist, and the first Jew to enter the Berlin Academy, have escaped the notice of the biographers. Professor Schuster has only to wait.

names connected with physiology, most of them as specialists on nerves. Other names will meet us among the Jewish doctors.

PHILOLOGY.—But it is chiefly in philology that Jewish science is so predominant. The philosophic side of philology is nowadays dominated by the school of M. LAZARUS (1834) and H. STEINTHAL (1828), who have founded the science of national psychology. Carl Abel (1839) is doing good work in treating of Comparative Lexicography, and L. Geiger was even a greater name (1829–70). M. Bréal (1832) is one of the greatest authorities on Comparative Mythology. Classical Philology is not without its Jewish masters, L. Friedländer (1814), the greatest living authority on the silver age of Rome, J. Bernays (1834–82), W. Freund (1806), on whose Latin dictionary all those used in England are founded, H. Weil (1818), Membre de l'Institut, Bernhardy* (1800–75), Lehrs* (1802–78), and L. Meyer (1833). Modern languages have also found their masters among Jews. The gifted A. L. Davids (1811–31) for Turkish, A. Vambery* (1832), and M. Bloch* (1815) for Hungarian, A. Darmesteter (1846) for French, D. Sanders (1819) for German and modern Greek, M. Landau (1837) for Italian, are here the Jewish names, while H. Bacharach (1810) is mentioned as a translator from German into French, and H. G. Ollendorf (1805–65) invented the method by which modern languages are still chiefly taught. But it is only natural that Jews should take the highest rank in Oriental Philology. In Germany Th. BENFEY* (1809–82) held the same position as Professor Max Müller does in England. His great speciality was Sanscrit, as is that of G. J. Ascoli (1829) and E. Brandes (1847).¹ Coptic is that of C. Abel, Egyptian of G. Ebers (1837), Hindustani of G. G. Leitner* (1840), and, it seems, all Eastern tongues of Dr. L. Loewe (1809). M. James Darmesteter (1849) is now one of the chief Zend scholars, and promises to be one of the most influential Orientalists in Europe. In the Semitic branches we find even more Jews. Professor J. OPPERT (1825) is perhaps the leading Assyriologist of the day, and has advanced the development of cuneiform more than any living man after Rawlinson. The promise of F. Luzzato (1829–54) in the same branch was cut off by an early death. The late M. A. Levy was an authority on Phoenician (1817–72). In Arabic G. Weil (1808) translated the 1,001 Nights, and wrote the Standard History of the Caliphs. The two Derenbours, J. Derenbourg père (1811) and H. Derenbourg fils (1844), S. Munk (1805–66), the Editor of Maimonides, I. Goldziher (1840), (also known for a rather wild book on the mythology of the Hebrews), and D. H. Müller are all well-known Arabists. We naturally meet with a crowd of Jewish names connected with the Hebrew language and literature. Of these the two greatest are undoubtedly LEOPOLD ZUNZ (1794) and MORITZ STEINSCHNEIDER (1816); though A. GEIGER (1810–74) displayed talents of as wide range as they. Graetz we have already mentioned, and S. L. Rapaport (1790–1867), co-founder with Zunz of modern Jewish

¹ I cannot find T. Goldstücker (1819–71) in any of the reference books.

scholarship, *S. D. Luzzato* (1800–65), *Z. Frankel* (1801–75), the chief of scholarly Talmudists, and *longo intervallo J. Fürst* (1805–73), author of a Hebrew Concordance and Lexicon, are the "next greatest names. *A. Jellinek* (1821) has never concentrated himself sufficiently to do justice to his powers, and the same may be said of *M. M. Kalisch* (1828–85). I would add the names of my friends *Dr. A. Neubauer* (1832) and *Dr. M. Friedländer* (1833) to the above. The versatile *L. Philippsohn* (1811), *M. Kayserling* (1828), and *D. Castelli* (1836) follow, and these may be succeeded by an alphabetical list of the remainder, *Dr. H. Adler* (1839), the Chief Rabbi, *Dr. N. M. Adler* (1803), *E. Benamozegh* (1822), *F. F. Benary** (1805), *A. Benisch* (1811–78) *J. H. Biesenthal** (1800), *I. Cahen* (1826), *S. Cahen* (1796–1863), *E. Carmoly* (1885–75), *B. Consolo* (1815), *M. Lattes* (1846–84), *I. Leeser* (1806–68), *D. Levi* (1740–99), *M. Mortara* (1815), *M. Margolianth** (1820–82), *M. Shapiro* (1816), and *M. Soave* (1801–83).¹

III.—PRACTICAL LIFE.

POLITICS.—Considering the restrictions under which they have laboured, Jews have shown marked ability for politics. Here they have two names of the very first rank. *Lord Beaconsfield** (1804–81), whatever we may think of his political achievement, is certainly entitled to rank among the first ten men of his time in England. *Ferdinand Lassalle* (1825–63), the Messiah of modern Socialism, made the greatest impression of any man of his time in Germany; in 1863, when he died in a duel at the early age of thirty-eight, Bismarck and he were regarded as the two foremost men of the Fatherland.* These great names are followed by those of *JULES SIMON** (1814), whose Jewish parentage is not certain, *I. A. CREMIEUX* (1796–1881), to whom the French nation awarded a public funeral, and *E. LASKEE* (1839–83), the leader of the National Liberal Party in Germany. Other important personages are *A. Fould* (1800–67), *M. Goudchaux* (1727–1862), *G. d'Eichthal** (1804), and *A. Naquet* (1834) in France; *L. Bamberger* (1828) and *J. Jacoby* (1805–77) in Germany, the latter the leading spirit of German Liberalism; and *I. Kuranda* (1811–84) and *E. Horn* (1825–75) in Austria; *T. Massarani* (1826) may follow here, though more distinguished as poet and painter than as politician. *W. Löwe* (1814) and *H. B. Oppenheim* (1819–80) in Germany; *Sir F.*

¹ These are all the names of Hebraists occurring in the books of reference to which I restrict myself. The lacunae under this head are naturally many. I can find nowhere any mention of *Barasch*, *S. Benedetti*, *A. Berliner*, *D. Chwolson**, *E. Deutsch* (1829–73), *L. Dukes*, *R. Eisel* of *Slonim*, *I. Erter*, *Fassel*, *J. Friedman*, *J. L. Gordon*, *Jos. Halèvy*, *Harkavy*, *N. Krochmal* (1785–1820), *L. Löw* (1811–75), *Mappo*, *J. S. Nathanson*, *Reifmann*, *Rosin*, *Schorr*, *Weiss*, not to speak of younger men whose fame is yet to come. On the other hand, Cooper inserts *J. Levisohn** (1797), whose only claim to distinction seems to be that a book he wrote was suppressed, and only two copies of it are now said to be in existence.

A brilliant study of the last year of his life is contained in George Meredith's "Tragic Comedians."

Goldsmid (1808-80), Baron Lionel de Rothschild (1808-81), Sir D. Salomons (1797-1873) and Sir B. S. Phillips (1811), in England, and MM. Millaud (1834), F. David (1796-1879), and Bédarrides (1817) in France, complete the list of politicians contained in my authorities. I. Artom (1829) may be added as a distinguished diplomatist.

THE PROFESSIONS also yield their quota of Jewish celebrities, though it is extremely seldom that a professional man reaches international rank. *Medicine* has been the favourite among Jews, who count among their number, in addition to those mentioned as physiologists, the names of *Traube* (1818-76), *O. Lombroso* (1836), the greatest of Italian doctors, *F. R. Liebreich* (1830), the ophthalmologist and inventor of the "eye mirror," *A. Hirsch* (1817), the standard authority on "medical geography," *Zeissl* (1812), the chief authority on syphilis, and *K. F. Canstatt* (1807-50), whose "Vierteljahrsschrift" was the repository of the first German medical work of the time. Less important names are *M. Heine**, brother of the poet (1807), *H. A. Bardeleben* (1819), a distinguished surgeon, *E. Altschul* (1812), a leading homeopathist, *Störk* (1820-75) the laryngoscopist, *M. L. O. Liebreich* (1839), brother of the ophthalmologist and discoverer of "chloralhydrate" with all its dubious uses; *Germain Sée* (1818), and his brother *Marc* (1827), *A. Lumbroso* (1813), *L. Mandl* (1812-81), *M. Lévi* (1809-72), and *A. Mayer* (1814) in Paris end the list of distinguished Jewish medical men. *Law* follows with the names of *E. Gans** (1798-1839) as one of the chief leaders in the German school of legal theory; *Sir G. Jessel* (1824-83), late Master of the Rolls, as one of the greatest practical lawyers of the age. *J. P. Benjamin* (1811-84) was the chief English barrister of his time, as well as one of the "headcentres" of the Southerners. *J. Glaser** (1831-85) has been recently described in the newspaper obituaries as "Austria's greatest jurist," and *H. Dernburg** (1829) is an important German legist. Other names of Jewish lawyers are *H. F. Jacobson* (1804-68), *T. M. C. Asser* (1838), who recently represented Holland at the Congo Conference, *I. Luzzati* (1847) and *M. Levi-Vita* (1840), two important Italian legists, and *J. Bédarrides* (1804-69), in France; *Lassalle* deserves to be mentioned here again for his "System des erworbenen Rechts." *Military* and *Naval* celebrities among Jews are only represented by one in each branch: *MASSENA* (1758-1817) on land, if we may accept Lord Beaconsfield's account of him as a Jew whose real name was "Menasse,"¹ and *U. P. Levy* (1781-1862) was an Admiral in the United States Navy of some note. *The Church* has not been without its Jewish ornaments; the sober *G. A. W. NEANDER** (1789-1850), whose Church History is still authoritative; the brilliant *P. Cassel** (1827), *M. Ballagi**

¹ "Coningsby," IV, xiv. M. Loeb informs me that there is nothing more in this identification than a "jew de mot." Much the same may be said of other parts of the same chapter which everybody has read. Everybody has also read Thackeray's inimitable parody of it in "Codlingsby," with the amusing climax, "The Pope is one of us!"

(Bloch), the leading Protestant theologian in Hungary, Bishop Hellmuth* of Huron (1820), the sole living Bishop of Hebrew blood, and D. Norsa* (1807), are other names. *Chess* is nowadays a profession, and mostly a Jewish profession; the two chief living names, *W. Steinits* (1837) and *J. H. Zukertort* (1842), being those of Jews, as well as two masters of the past, *A. Alexandre* (1766–1850) and *J. G. Löwenthal* (1810–76). *Education* gives us the names of *D. Friedlander* (1750–1834) and *Levi-Alvares* (1794–1870).

COMMERCE AND PHILANTHROPY have been usually combined among Jewish celebrities. This is certainly the case with *S. Heine* (1766–1844), the *Rothschilds*, *Meyer* (1743–1812), *Lionel* (1808–81), *Edmond* (1826), and *James* (1844–84), *Sir M. Montefiore* (1784–1885); the *Pereires*, *Edmond* (1800–75), and *James* (1806–80), *L. R. Bischoffsheim* (1800–84), *J. Mires* (1809–71), and *J. Truro* (1775–1854). These all obtained fortunes in finance. Of great masters of industry there is only one important name, that of *B. H. Strausberg** (1828–84), the “Railway King” of Germany; the only other name is that of *J. Alexandre* (1804–76), a pianoforte manufacturer.

SALONS of importance have been presided over by brilliant Jewesses. The three chief centres of cultured life at Berlin at the beginning of this century were the *salons* of *Rachel von Ense** (1771–1833), *Dorothea Mendelssohn-Schlegel** (1769–1839), and *Henriette Herz* (1764–1847).¹

TRAVEL may conclude our new list with the names of *Joseph Wolff** (1795–62), the eccentric; †*W. G. Palgrave* (1826), who opened up Central Arabia; *A. Vambery** (1832), the leading authority on Central Asia; †*Sir F. H. Goldsmid*, the Persian traveller; *G. Oppert* (1836); and *N. Davis** (1812–82), the explorer of Carthage, if he were a Jew.

The above list does not claim or aim to be exhaustive. It only professes to contain the names of such Jews as have found their way into dictionaries of general biography. By restricting myself thus I have been obliged to insert many names whom I should not myself have thought worthy of mention, and to omit others who appear to me to have been undeservedly overlooked. I have given a few of the latter in footnotes, but have not referred to the many young men of promise now springing up, as my comparison is mainly limited to those over fifty, at which age men first obtain admission to the rolls of fame. On the whole, I do not find many important omissions; even those of the third class rarely fail to attract the attention of the experts in celebrity. I have been obliged to restrict myself in this way as the immediate object of the compilation has been to find materials for discussing the much vexed question as to the relative ability of Jews. To compare them with others we must take the same sources as those from which the names of celebrities generally are taken. For the same purpose it

¹ One of the most important English salons was that of Countess Waldegrave Braham's daughter, while the gifted family of Raffalovitch holds one of the chief salons in Paris at the present day (*Times*, Sept. 15, 1885).

has been necessary for me to undertake the invidious task of classing the names in four classes corresponding to the four highest classes fixed with mathematical accuracy by Mr. Galton in his "Hereditary Genius," 1869 (p. 34). The fourth class cannot be complete, many names coming by accident into the dictionaries. For purposes of comparison the names only of those in black letters, capitals, or italics are to be considered, though the remainder are useful as means of judging the subjects of Jewish pre-eminence. Even the third class are reckoned by Mr. Galton to reach the average of an English judge of the best times of the Bench, and every one of the Jewish celebrities are far indeed above the average of those men who gain the ordinary prizes of life.

APPENDIX II.

Illustrious Europeans (1785-1885).

I have made the following estimate of the ability of the chief civilised nations founded on the number of first class men they have produced during the century 1785-1885, as compared with the number of males who have reached fifty during that period. The results are of course precarious owing to the difficulty of deciding upon the names of first class men. But they agree sufficiently with popular impressions to deserve record. The validity of the results would be much increased if we could obtain lists of the second class men.

The third column of figures give the relative order of ability of the different nationalities. The discrepancy between the table of the general ability of the different countries, and that in the note on page *xlix*, giving that of the Jewish ability in the same, indicates the influence of the social environment in making talent "kinetic" instead of "potential." The English names and numbers may be taken as confirming Mr. Galton's estimate of one genius per million males over fifty. At first sight there seem to be nearly double that number. But G. Eliot was a woman, Pitt and Byron never reached fifty, Bentham and Faraday are doubtful (though this is counterbalanced by the claims of Shelley and Turner), and Darwin is a man of many millions. So that there have been but 12 certain geniuses among 10 or 11 millions over fifty. I would also call attention to the remarkable groupings of the births of the Englishmen: three clustered around the date 1770 (Wellington 1769, Wordsworth 1770, Scott 1771), five round 1810 (Darwin, Gladstone, and Tennyson all 1809, Thackeray 1811, Dickens 1812), and three round 1820 (Ruskin 1819, Eliot and Spencer 1820). Judging from the middle cluster, it would seem that a nation gives birth to its greatest men when in the throes of its severest struggles. There is, as it were, an incarnation of the *Zeitgeist*. It would be interesting to see if the next batch of European genius has any similar relation to the year 1848.

Nation.	No. of million males reached fifty 1785-1885.	No. of first class men.	No. per million.	Names.
Austria ..	11	2	.2	Kossuth (?), Mozart.
England ..	10	18	1.8	Beaconsfield, Bentham (?), Byron, Carlyle, Darwin, Dickens, G. Eliot, Faraday (?), Gladstone, Macaulay, Pitt, Ruskin, Scott, Spencer, Tennyson, Thackeray, Wordsworth.
France ..	12	12	1	Comte, Dumas père (?), Gambetta, V. Hugo, Laplace, Lesseps (?), Mirabeau, Napoleon, Pasteur, Renan, Robespierre, G. Sand, Thiers.
Germany ..	10	19	1.9	Beethoven, Bismarck, Fichte, Gauss, Goethe, Grimm, Hegel, Heine, Helmholtz, Lessalle, Mendelssohn, Moltke, Mommsen, Schiller, Schopenhauer, Schubert, Stein, Wagner.
Italy	7	8	.4	Garibaldi, Leopardi (?), Mazzini.
Russia ..	23	2	.1	Skobelef (?), Turgenief.
United States	8	2	.3	Emerson (?), Washington (?).
All	81	57	.7	

Explanation of Plate XV.

Fig. 1 is only intended to illustrate the fact that closed curves on the same side of the same base, and containing the same area, must cross one another. This principle applied to the curves in fig. 2 enables us to say that if there are more Scotchmen and Jews in the extreme classes, there must be less of them in the middle or mediocre class.

Fig. 2 gives, as it were, the shape of the boundary walls of a million Englishmen, Scotchmen, and Jews penned into sixteen classes, ranging regularly in order of ability. The horizontal dotted lines give the different classes, named symmetrically from the centre line *A*, *B*, *C*, &c., towards one end, *a*, *b*, *c* towards the other. It is assumed that a class indicated by a small letter is of the same size as that represented by a large letter. The numbers

in each class in the three races are given in the Table. The English numbers in this are from Mr. Galton's book; the Scotch and Jewish numbers have been calculated from—(1) the number of celebrities; (2) the number of lunatics; (3) the principle illustrated by fig. 1, that the curves must cross.

Fig. 3 is merely an illustration of the statement on page li, the crosses marking the percentiles shown to be equal by the same crosses in fig. 2. Properly speaking, the Jewish and Scotch percentile bars ought to be elastic and extend equally on both sides of the English fiftieth percentile. A more accurate representation of the relative ability of each percentile among the three races would be to draw the "ogives" for each so that the ordinates corresponding to the 72nd, 74th, 76th percentile respectively should be equal. This would enable us to determine the relative ability of each percentile. But it would be misleading to attempt such accuracy at present, and the more popular statement of the text may serve as a rough indication in the meanwhile.

On the COMPARATIVE ANTHROPOMETRY of ENGLISH JEWS.

By JOSEPH JACOBS and ISIDORE SPIELMAN.

(WITH PLATE IV.)

In the present paper, we give the results of a number of anthropometric observations on English Jews of various classes carried out on lines as far as possible parallel to Mr. Galton's classical experiments at the International Health Exhibition, 1885. The measurements were made in the first instance at the Jewish Working Men's Club, Great Alie Street, E, the Committee of which was kind enough to grant us the use of a room for several weeks, which was fitted up, as nearly as circumstances would permit, in a manner similar to Mr. Galton's Anthropometric Laboratory at South Kensington. Considerable interest was shown by the members of the Club, of both sexes, a large number of whom submitted themselves to the somewhat wearying process of being tested and measured.

After some time the laboratory was moved to the West End where a number of the Jews and Jewesses inhabiting that quarter were good enough to go through it and submit to the various tests. The results were in each case written in duplicate on a printed form, one copy being torn off and presented to the examinees as some slight return for their kindness.

Great assistance was given throughout by Mr. and Mrs. Ernest Franklin, while Mr. Lissack, the Honorary Secretary of the Club, facilitated our work in every way in his power.

Our apparatus was modelled after those used by Mr. Galton at the Health Exhibition in order that our comparisons might be as correct as possible.

The measurements and tests taken were:—

Height standing without shoes.

Height sitting.

Keenness of sight.

Judgment of eye.

Colour sense.

Hearing ; highest audible note.

Breathing power (spirometer, graduated cubic inches).

Strength of stronger hand.

Strength of pull.

Weight in ordinary indoor clothing.

Chest circumference.

Colour of eyes and hair.

Besides these we took measurements of the length and breadth of head, for the most part with ordinary callipers graduated

on the French scale; but towards the end of our investigations we devised an instrument which might be adopted by anthropologists.

We found that this head measurement could be more conveniently taken when the "subject" is in a sitting position and directly after the sitting height is obtained. The apparatus consists of a flat piece of board about 12" x 9". Directly beneath this, two guides are suspended about 9" apart, so that the widest head may easily go between them. A metal socket moves up and down on each of these guides and is made to fit tightly by means of springs. Attached to the sockets is a frame of steel wire $\frac{3}{16}$ " thick, and which is held in a perfectly horizontal position. This wire is bent in such a way as to make the "tour of the face," resting like a spectacle frame without eye-holes, upon the lower socket of the eye.

The measurement is taken thus:—The board is brought down horizontally upon the vertex of the head of the person sitting, so that the head comes between the guides. The sockets carrying the frame are then brought down the guides until the curved part of the frame rests upon the lower socket of the eye, and the sides of the frame are level with the orifice of the ear. This compels the head to be held in the requisite position for taking this measurement, and the reading upon each guide (which is graduated in centimetres and millimetres) should be identical. The wire may be pressed towards the ear when measuring narrow heads and without losing the horizontal position.

Altogether, by the methods described above, we took on an average 21 measurements on each of 423 individuals; altogether, 8,863 measurements, a number sufficient to give trustworthy results, as the persons tested were themselves average samples of the two chief classes into which English Jews may be considered as divided. These may be described as "West End Jews," the better nurtured inhabitants of the West End and descendants for the most part of Jews who have been long settled in this country, and "East End Jews," the less fortunately situated Jewish dwellers at the East End, the parents of whom in many cases were born abroad. As far as possible it was desirable to get out results for each of these classes separately, and for the most part we have done so. By this means we are enabled to make our results bear directly on one of the burning questions of anthropology, that of nurture *v.* nature, to use Mr. Galton's convenient phraseology. For the "West End Jews" are ultimately derived from exactly the same race and class as the East End Jews, so that differences of race are totally eliminated, and we are enabled to trace the influence of nurture pure and simple. The problem of deter-

mining purely "racial characteristics" will be considerably simplified if we can in this way determine what may be described in contradistinction as "nurtural characteristics." It is in this connection that our investigations appear to us to have a wider outlook than ordinary anthropometric results.

Our method has been to contrast West End and East End Jews so as to get at the influence of nurture. But besides this, there might be a residuum of race influence which could only be tested by comparison with another race. West End Jews might differ favourably in height from East End Jews and yet all Jews differ unfavourably in height from Englishmen, owing to original difference of race. Another comparison was therefore necessary in order to fully test our results and that was with Englishmen generally.

Here we have Mr. Galton's results before us as a standard, and we have accordingly placed the results for all the Jews examined by us side by side with his results for the English men and women examined at the Health Exhibition. We have throughout adopted Mr. Galton's method of "percentiles" (see "Journ. Anthropol. Instit.", xiv, 1885, p. 275) and have given the 5th, 25th, 50th, 75th and 95th percentile in each case. The extremes give what we proposed to call the "range" while the middle number giving practically the "medium" or "average" result, though for some purposes there is a slight difference between the two. Finally we have worked out similar calculations for the 50 or so Sephardic Jews, descendants of the Jews expelled from Spain and mostly descendants of the oldest Jewish residents in this country.

With these preliminary remarks we may now at once present a table summing up our main results. We give also, in Plate IV, a set of curves showing the results of these measurements, and comparing them with Mr. Galton's taken at the Health Exhibition.

The curves commence on the left hand side at the minimum, and end on the right hand side at the maximum capacity, whilst the perpendicular lines, where cutting the curves denote the 5th, 25th, 50th, 75th, and 95th percentile measurements. Of course the most important of these perpendicular lines is the centre one, which shows the mean or average of each class as represented by the curves. We need scarcely add that these curves merely express in graphic form the information contained in Table I.

The black solid curve represents Health Exhibition male measurements.

The bar curve, *all Jewish* measurements for comparison.

The star curve, West End Jews.

The dotted curve, East End Jews.

The dot-and-bar curve, the Sephardim (Spanish and Portuguese Jews).

Comparative Anthropometry of English Jews. By Joseph Jacobs, B.A., and Isidore Spielman.

TABLE I.

Subject of Measurement.	Sex	" East End " Jews.			" West End " Jews.			Sephardic Jews.			All Jews.			Health Examination Measurements (1886).		
		5th	25th	50th	75th	95th	5th	25th	50th	75th	95th	5th	25th	50th	75th	95th
Height standing, without shoes, in inches ...	Male ...	60.2	63.0	64.2	66.0	68.0	63.4	65.5	67.7	69.4	70.4	64.2	66.0	68.0	70.0	72.4
Ditto	Female	57.3	60.5	61.3	63.0	65.0	59.0	60.0	62.0	63.0	66.5	57.5	59.0	60.0	62.0	64.5
Height sitting, from seat of chair, in inches ...	Male ...	31.2	33.0	33.5	34.7	36.2	33.5	34.7	35.7	36.6	37.2	33.5	34.7	35.7	36.6	37.2
Ditto	Female	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...
Span of arms, in inches ...	Male ...	68.0	66.5	67.7	69.0	70.7	64.0	66.7	67.0	67.4	68.0	65.5	66.7	68.0	69.0	71.8
Ditto	Female	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...
Weight in ordinary indoor clothing, in lbs. ...	Male ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...
Ditto	Female	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...
Breathing capacity, in cubic inches ...	Male ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	140	150	190	220	245
Ditto	Female	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	117	122	139	166	187
Strength of pull, as archer with bow, in lbs. ...	Male ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	60	67	70	79	82
Ditto	Female	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	107	110	119	145	154
Strength of squeeze of stronger hand, in lbs. ...	Male ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	65	70	89	93	94
Ditto	Female	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	100	112	130	145	165
Keenness of sight, reading distance, in inches ...	Male ...	0	13	19	25	29	7	19	29	35	38	13	19	25	36	43
Ditto	Female	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...

Note.—Ages and Units as in Mr. F. Galton's Measurements.
5th, 25th, 50th, 75th, 95th per centiles.

The lighter curves denote the corresponding female measurements in each case.

It will be observed that the black curve is almost invariably at the top of each table both in minimum and maximum measurements, and frequently in the mean measurement; but Mr. Galton's Health Exhibition visitors are beaten in two places: their maximum is inferior in weight to the *Sephardic Jews*, and in keenness of sight to:—The maximum of all Jews and Jewesses, Sephardim and West End Jews. The East End Jews are there, as in all of our measurements, inferior to all but those of the females.

The *Sephardic Jews* are the highest in maximum in weight measurement. They are the *highest* also in keenness of sight test, and their mean is good in both cases. In strength of squeeze they are the highest in the mean, and lowest in minimum and maximum. In strength of pull, they are the highest in minimum, and lowest in mean and maximum. In span, their average is the lowest, but recovers towards the maximum. In height, they retain the 3rd place in maximum, minimum, and mean, the Health Exhibition males and "West End" Jews being superior. In breathing capacity, the same is the case.

The *West End Jews* are highest in average in keenness of sight test, as well as in span of arms. In height, sitting and standing, they retain an even position directly after Health Exhibition male measurements.

The *East End Jews* are practically the lowest everywhere in minimum, maximum, and mean.

The *Jewesses* are superior to the *Jews* in keenness of sight, both in average as well as in minimum and maximum. In this test they are above the Health Exhibition males and females, the "All Jews" maximum, and the East End Jews. The Jewesses are above the Health Exhibition females in minimum, maximum, and mean of strength of squeeze. They are, however, inferior to them in breathing capacity. They are again superior in weight to their Health Exhibition sisters; but inferior in height, sitting and standing, and in span.

The general result of this table is tolerably clear. English Jews in general compare unfavourably in almost all anthropological measurements with the class of Englishmen who visited the Health Exhibition. But if we take the West End Jews, who were probably of very nearly the same class as the Exhibition visitors, the inferiority vanishes almost entirely. Thus, to take an example, while the mean height of "All Jews" was only 65 inches, against 67.9 inches for Mr. Galton's subjects, an inferiority of nearly 3 inches, the West End Jews averaged

67.5 inches against 67.9 inches, an almost inappreciable difference. It is obvious that nurture has made the difference between the heights, both of West End and East End Jews, and between Jews and Englishmen. Are we then to dismiss height altogether from our tests of race? Is it only a difference of nurture that makes the contrast between the Hottentot and the Patagonian? Not altogether, as we can see by scrutinising a little more closely the figures we are discussing. The "means" are much the same among the well-nurtured Jews and the visitors of the Health Exhibition, but "the range," as we have called it, is different. Thus, to take the upper limit, while Englishmen pure and simple reached 72.4 inches, all Jews reached 70 inches, and West End Jews reached 70.4 inches.

Here we have seemingly an instance where long continued bad nurture through many generations shows its influence on the measurements of well-nurtured descendants not by reducing the average, but by restricting the range and preventing any very great variations from the artificially reached average.

If this example could be taken as typical, the real test of races is rather to be found in the extreme cases than in the mean. As a matter of fact this is practically the way in which popular judgments about races is made. And yet even in the very case before us we have observed a striking instance of the permanence of race types, even in so variable a thing as height, which seems at first sight to depend only on nurture. In Mr. Jacob's paper on "The Racial Characteristics of Modern Jews" (Journal, Vol. xv, 1885, p. 34), he gives the measurements of height for nearly 13,000 Jews, which average 161.2 millimetres or 63.47 inches. This is remarkably near the 63.75 inches which is given in our table as the mean height of all the English Jews examined by us. Altogether it would appear that while anthropological measurements depend on nurture, social conditions tend to preserve the same kind of nurture in various races, and so keep the racial measurements constant. If any change of the conditions of nurture occur, pre-existing conditions of bad nurture tend to lower the "range" in well-nurtured descendants rather than to depress the average. The extremes, say the 95th per centile, are thus more trustworthy racial tests than the average or mean.

Applying this test to our general results, we find inferiority all along the line in the general results of English Jews as compared with other Englishmen, except in two particulars, viz., weight in Jewesses and keenness of sight in both sexes. It is curious that while the average weight of Jewesses is 9 lbs. below that of other Englishwomen, the highest weight reached is 5 lbs. more in the cases of the Jewesses, a confirmation of the

popular impression of the superior solidity of the Jewess. Turning to keenness of sight, we find again that while the Jewish average is inferior, the higher limit is superior to the extent of 1 inch in the case of males, and of no less than 4 inches in the case of females. A "Jew's eye," in its literal sense, seems therefore a valuable possession so far as keenness of sight, though in its appreciation of colour it is far from being so valuable, as we shall see.

Having discussed such of our results as can be compared with Mr. Galton's, we may now proceed to give the additional information we have obtained and compare them with the results of Mr. Jacob's paper just referred to. Thus taking the colour of hair and eyes, we may compare the results reached as regards English, German, Austrian, and Russian Jews, and may contrast them with the Jews of Spanish descent known as Sephardim.

Colour of Eyes and Hair.

TABLE II.

	Eyes.			Hair.			
	Blue.	Grey.	Brown.	Blonde.	Brown.	Black.	Red.
English Ashkenazic Jews	11·1	30·1	58·8	25·3	52·5	21·3	0·7
English Sephardic Jews	21·3	11·9	66·8	11·9	61·6	26·5	0·0
Prussian Jews	18·7	27·8	53·5	32·4	55·5	11·6	0·6
Austrian Jews	23·5	30·6	45·9	27·0	55·4	17·0	0·6
Russian Jews	23·0	24·1	52·9	23·2	59·2	13·1	4·5

It will be observed that the number of blue-eyed English Jews is very small, viz., only 11 per cent. (as indicated by the centre line of figures). The Sephardim show 21 per cent. Taking the blue and grey eyes together as *light coloured eyes*, they reach as much as 37 per cent., as against an average of about 50 per cent. in comparison with their foreign brethren, Prussians, Austrians, and Russians.

The main point in the results concerning hair is the higher proportion of absolutely *black* hair among *all English* Jews, than among those of Prussia, Austria, and Russia. The Sephardim have the largest amount of *black* and the smallest of *blonde* hair, and we did not find any example of *red* hair among them.

Considering the absence of any absolute standards for these colours, the results are tolerably uniform, except as regards two points which are probably connected together, the less proportion of blue eyes and the greater proportion of black hair among English Jews as compared with their foreign brethren.

This may possibly be explained to some degree by the fifth class of Jews, which we have included in the above table. The Sephardim or Jews descended from the refugees from Spain after the expulsion in 1492, are generally darker in complexion, and have darker hair than other Jews, as can be seen from the above table, or still more decidedly from the table given by Dr. Beddoe at the end of his paper on the "Ethnological Characteristics of the Jewish race" (Ethnol. Trans. 1869). Now our measurements included nearly 50 Sephardim, and doubtless others who had Sephardic blood in their veins, so that the black hair of English Jews may be referred to the greater admixture of Sephardim, who do not exist elsewhere to any extent in Northern Europe (except in Holland).¹ On the other hand, the paucity of blue eyes among English Jews cannot be accounted for on this ground, as the Sephardim do not differ materially in this respect from the rest of Jews. We suspect that a confusion of nomenclature has crept in here, and that we were perhaps more rigid than the foreign observers in restricting the term blue to the purest shade of that colour.

While on this point, we may bring in our results as to the colour blindness of English Jews, which is perhaps the most marked characteristic we have reached. This was tested by an instrument exhibiting strips of wool, among which are four with a green shade, and the subject has to select these by placing pegs opposite to them. However the fact is to be explained, the Jews in our experiments showed a remarkable inability to undergo this simple test, as is shown by the following table which gives the percentage of failures.

	East End.	West End.	All.	Sephardim.
Jews	14·8	3·4	12·7	13·4
Jewesses	—	2·1	2·0	0

Previous inquirers have observed the inferiority of the Jewish race in this respect, but the results reached far exceed any

¹ It is to be remarked, however, that this admixture is only of recent date, both branches of the Jewish race having been practically endogamous.

previously reached, which average about 4 per cent. for Jews, whereas our results are more than three times as large. It is possible that in a few instances the directions given were not understood, and the mistakes were rather misunderstandings. But it was too obviously plain in many instances where the subject declared that he could not see any difference between brick-red and pea green, and the fullest allowance for misunderstandings would not reduce the percentage to anything under 10 per cent. The causes of this startling defect are probably to be found in the long continuance of Jewish life in cities, where so much less colour and especially so much less green is to be met with. Of its effects we may refer to two: the absence of any painters of great ability among Jewish celebrities, and the want of taste shown by Jewesses of the lower grades of society in the choice of materials for dress, &c. Where there is so large an amount of total colour blindness, there must also co-exist a still larger proportion of dulled sense of colour and a general lack of interest in the delights of colour, especially in its more refined forms. It seemed to us worth while calling attention to this defect, as it is probable that early training can in some measure overcome it, and it is clear that colour lessons should form part of every Jewish child's training.

We may now pass to another measurement in which Jews are generally credited with inferiority and not without reason. We refer to the girth or circumference of chest which is regarded by some anthropologists as of such importance that they calculate from this the "index of vitality." Unfortunately, we cannot in this case compare with Mr. Galton's results, but it is at any rate reassuring to find that English Jews in this respect compare somewhat favourably with their foreign brethren; their average being 35 inches against 30 cm., or 31.5 inches for 8,000 foreign Jews. Here again the influence of nurture is shown by comparing the measurements for East and West.

Percentiles.	East End.	West End.	All.	Sephardim.
5th, 50th, 95th ..	32-35-39.5	34-36.5-41	32.5-35-40	34-36-39.5

It may be observed that in this important characteristic the Sephardic Jews do not show to any advantage, as it must be confessed they do in most of the measurements in Table I. Except in span and breathing capacity, the Spanish Jews show a slight but marked superiority over their Ashkenazic co-

religionists as the rest of Jews are called. It is a point worthy of notice that the three points of Sephardic inferiority, span, girth, and breathing capacity, have to do with the lungs, and would seem to indicate a lower "index of vitality" among the Spanish Jews. They certainly seem to be dying out, and no longer possess the pre-eminence among Jews that they once did. It would be worth while inquiring whether phthisis is to any appreciable extent more frequent among them than among other Jews.

We now pass from these bodily measurements to those of the head on which we have collected materials greater in number than any observer who hitherto dealt with Jewish craniometry on the living subject. We may sum up the whole material at present available in the following table, in which we have kept to the older names and proportions (mesocephalic = 77·8 — 80).

No.	Index.	Dolicho-	Meso-	Brachy-cephalic.	Observer.
67	82·2	19·4	26·9	53·7	Dybowski.
100	83·2	3·0	11·0	86·0	Blechmann.
313	83·5	4·8	10·9	84·3	Kopernicki.
363	80·0	28·3	28·3	47·4	Jacobs and Spielman.
51	—	17·0	34·0	39·0	Sephardim.

From this it would seem that English Jews are far more long-headed (dolichocephalic) than those on the Continent. This may be partly explained by the fact that our results include some Jewesses and a few lads whose undeveloped crania would tend to lower the average.

But there is, we believe, another explanation which will account for the phenomenon without supposing any deterioration on the part of English Jews, if deterioration it is to be long-headed physically. There might be two men whose cranial index was 75, but the one might have a skull 15 x 20 centimetres, the other 18 x 24. It is obvious that the latter has a larger receptacle for his brain, though he may have the same cranial index. A better test of this "capacity" would be to adopt the plan followed by Mr. Galton in his treatment of Dr. Venn's craniometrical results with regard to Cambridge students. He multiplied height, breadth, and length of skull together, and thus obtained what might be termed a measure of the "knowledge box" of his subject.

Unfortunately, we were unable to take the height of skull,

and could not therefore make the full correction. But we have multiplied together length and breadth, and thus obtained what we might call the "foundation" index of our subjects' skulls. On arranging these as before with the mean between minimum and maximum, and contrasting these with results of the cranial index, we obtain some very light-giving results, which are of sufficient interest to deserve some minute attention being paid to them.

"Foundation Index" of Jewish Heads (5th, 25th, 50th, 75th, 95th per centiles).

TABLE III.

	5th	25th	50th	75th	95th
All English Jews and Jewesses	24.9	26.6	28.0	30.2	32.0
Sephardic Jews	25.8	27.6	28.7	30.4	32.2
West End Jews over 22 years of age	28.5	29.2	30.4	32.0	32.0
West End Jews under 22 years of age	27.5	28.3	29.6	30.0	32.8
East End Jews over 22 years of age	25.2	27.6	27.9	29.2	32.0
East End Jews under 22 years of age	24.0	26.6	27.7	29.2	31.5
West End Jewesses	25.2	26.8	28.5	29.6	32.0
East End Jewesses	24.6	26.1	27.5	28.5	29.

Here we observe that while the cranial index of the West End Jews indicates dolichocephalism, and, therefore, it would seem inferiority, their "foundation" index would seem to go on all fours with their presumed superiority in intellectual capacity. We find, too, that this index increases slightly with age, that it is inferior among females in the West End, but only slightly so among females in the East. So far then as any knocking at the skull can give any clue of the value of what is within, the "foundation" index would seem to answer that purpose much better than the cranial index, and is much simpler to get at than Mr. Galton's tridimensional "knowledge box." We append a table which gives at once by merely reading off in centimetres length and breadth of skull, both "cranial" index and "foundation" index.

"Cranial" and "Foundation" Indexes given in centimetres.

Length.	Breadth.						
	14	14½	15	15½	16	16½	17
17	82.3	85.4	88.2	91.3	94.2	97.0	100.0
	23.8	24.6	25.5	26.4	27.2	28.0	28.9
17½	79.9	82.8	85.5	88.5	91.3	94.2	97.1
	24.5	25.4	26.2	27.2	28.0	28.9	29.7
18	77.7	80.5	83.4	86.2	88.9	91.6	96.4
	25.2	26.1	27.0	27.9	28.7	29.7	30.6
18½	75.7	78.3	81.0	83.7	86.4	89.2	91.9
	25.9	26.8	27.7	28.7	28.6	30.5	31.4
19	73.6	76.3	79.9	81.7	84.3	86.7	89.5
	26.6	27.5	28.5	29.5	30.4	31.3	32.3
19½	71.8	73.7	76.9	79.5	82.1	84.6	87.2
	27.3	28.3	29.2	30.4	31.2	32.2	33.1
20	70.0	72.5	75.0	77.5	80.0	82.5	85.0
	28.0	29.0	30.0	31.0	32.0	33.0	34.0
20½	68.3	70.7	72.0	75.7	78.0	80.0	82.7
	23.8	29.7	30.7	31.8	32.8	33.8	34.8

Example:—To find cranial index of skull 15 cm. broad by 19 cm. long, look down vertical column headed 15 and along horizontal line opposite figure 19, and read off cranial index 79.9 and foundation index 28.5 (really 285 square cm.).

These seem to us the main points of interest elicited during the progress of our inquiries, and we now have the pleasure of submitting them to the Anthropological Institute for comment and discussion.

Description of Plate IV.

This Plate represents in graphic form the results given in Table I. The black vertical lines represent the 5th, 25th, 50th, 75th and 95th percentiles. The various curves cross these at points showing the measurements reached by 95, 75, 50, 25 and 5 per cent. of the subjects measured. The letters attached to either end of each curve indicate the different classes whose measurements are given.

HE (continuous thick curve) = Health Exhibition results for males.

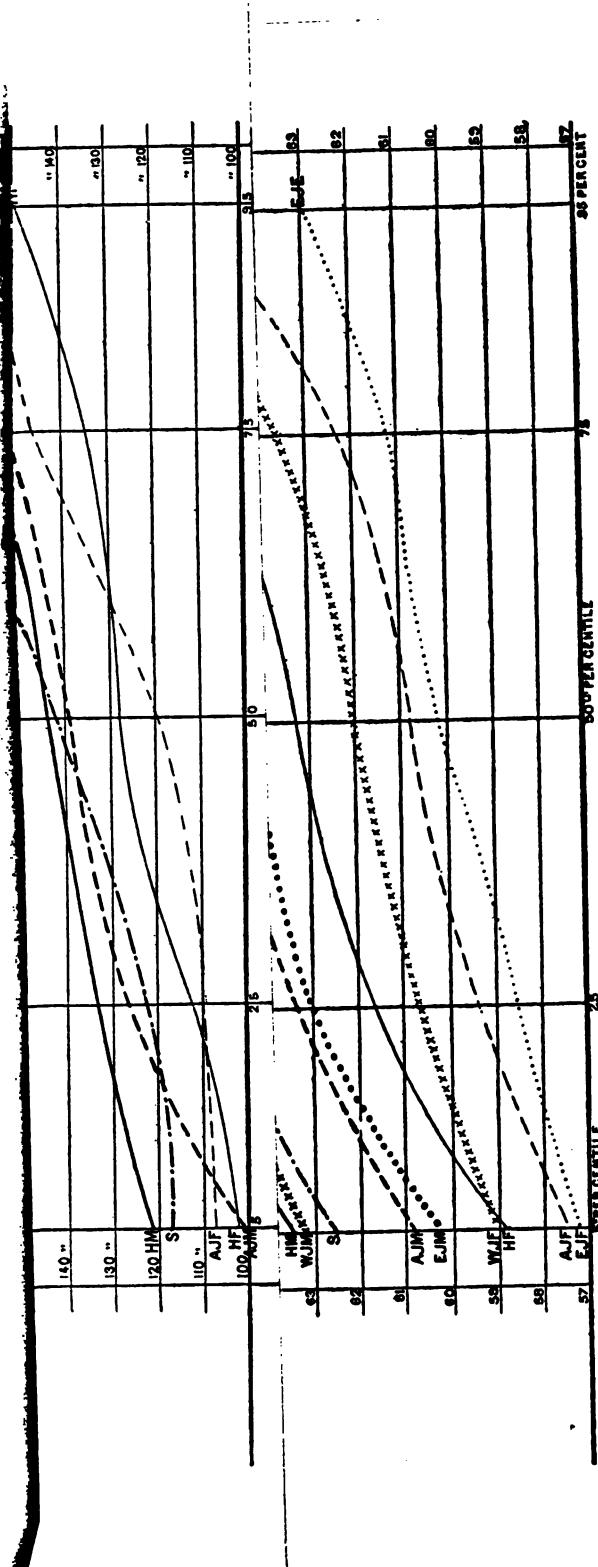
HF (continuous thin) = Health Exhibition results for females.

AJM (thick bars) = All Jews. **AJF** (thin bars) = All Jewesses.

WJM (heavy stars) = West End Jews. **WJF** (light stars) = West End Jewesses.

EJM (heavy dots) = East End Jews. **EJF** (light dots) = East End Jewesses.

S (dots and bars) = Sephardim or Spanish Jews.



GRAPHIC REPRESENTATION OF THE RESULTS OF MESSRS. JACOBS AND SPIELMAN'S MEASUREMENTS OF ENGLISH JEWS COMPARED WITH
MR. GALTON'S MEASUREMENTS AT THE HEALTH EXHIBITION.

Thus to take an example: if we arranged 100 of each of these classes in a row from the shortest to the tallest, the seventy-fifth in each company would have the height shown by the measurement indicated by the corresponding curve at the seventy-fifth percentile of the lowest set of curves; *e.g.* the seventy-fifth of the East End Jews would be exactly 66 inches, of the Sephardim exactly 68, and so on with the rest.

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